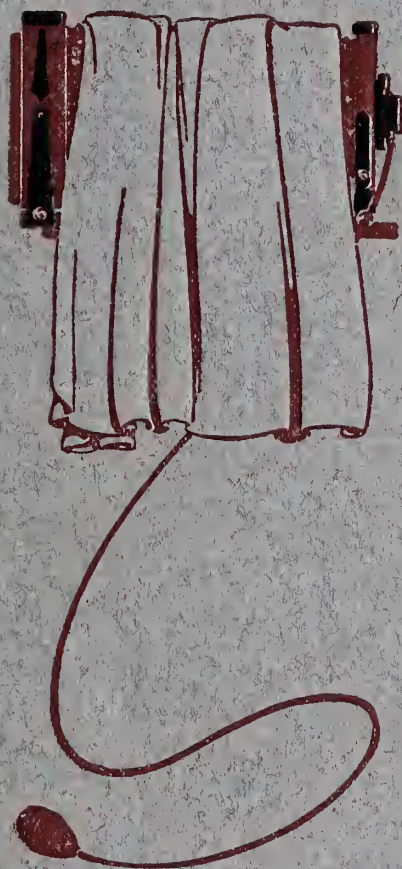


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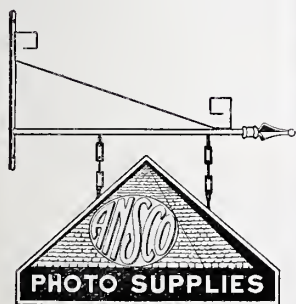


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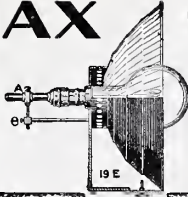
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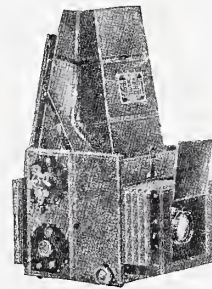
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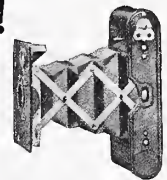
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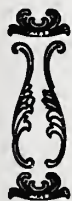
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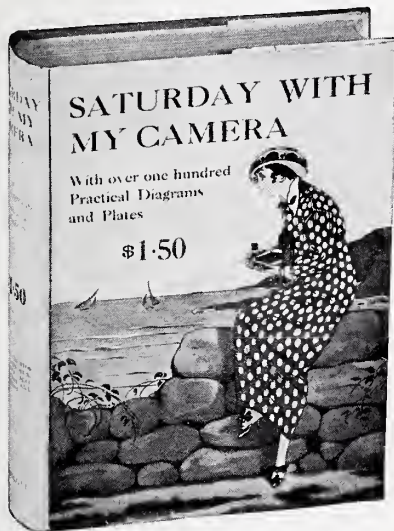
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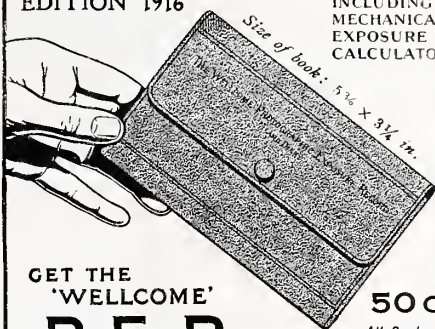
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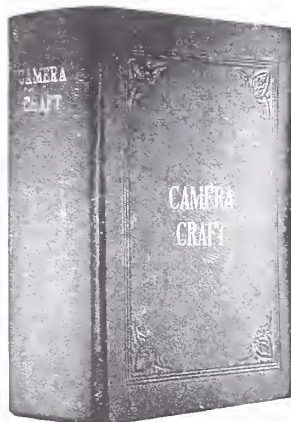
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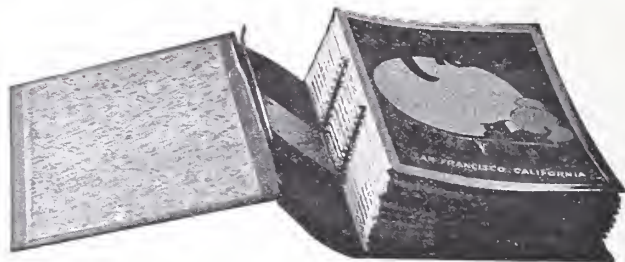
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FAYETTE J. CLUTE, Editor

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SAN FRANCISCO

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VOL. XXIII

MARCH, 1916

No. 3

Home Photography

By W. E. Lenney



With Illustrations by the Author



CHILDHOOD'S HAPPY DAYS

the new and different conditions that exist in the homes, is all that deters some of them from making a venture into this promising field.

Portrait photography as a business has, during the past few years, experienced some radical changes; conditions have been far from settled; rather, they have been more unsettled than they usually are. The conservative studio man has been having his troubles, not only with the post card man cutting quite deeply into his medium-class trade, but with the home portraiture worker going after his patrons who buy the better grades of work. To such an extent has this progressed that some professional portrait men are seriously considering whether it would not be advisable to get away from their studio and go after some of this lucrative home portrait work themselves. A fear that they may make a failure of the work, under

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While it cannot be said to be easy to succeed in making the class of pictures for which a discriminating clientele will pay good prices, I know that the advanced worker, if at all ambitious, can make as perfect lightings by ordinary windows, assisted at times by the flash, as he can make under the skylight. Concentration of light and subordination of detail are easily accomplished by simply stretching a thickness or two of black cheese cloth across the lower part of the window being used, fastening it in place with push pins. This done, the light will fall from above at the proper angle; and, working parallel to the window, with sitter placed as close thereto as possible, the best of results can be obtained. A background of black or gray cloth, as desired, can be fastened against the wall with push pins, while a reflector of white or gray cloth can be



EXAMPLES OF EVERY-DAY HOME PORTRAITURE

placed upon any sort of a support that may be handy. I frequently use the back of my closed flash lamp, running it up high for the purpose. By working in this way, anybody who understands lighting can make perfect negatives with ease.

However, the plan will hardly answer for children, owing to the rather long exposures required, so here is where one must have recourse to the flash, without which it would not be possible to achieve success except under the most favorable conditions. By proper manipulation of the light, negatives of perfect roundness and snappy sparkling high lights can be secured with the flash just as readily as by daylight. The formula is to use the light at the proper height and angle, using exact amount of powder, and employing a vigorous developer. The results will be perfectly lighted negatives. While the novice will require some

HOME PHOTOGRAPHY



HOME PORTRAITURE—THE TWINS

experience before he can adjust these details, the experienced photographer should have little or no trouble.

One has only to consider the front of the flash lamp as the uncurtained portion of a skylight, at least in the matter of its height and angle. Of course, while daylight would pass through an opening of like size in a skylight in practically parallel lines, the light from the front of the flash lamp spreads out at quite a wide angle, simply because its source, the flash itself, is close to the opening or front of the machine, while the illumination from the sky is some distance away from the opening in the skylight. The next point to remember

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is that the intensity of the light is practically in the same ratio as the square of its distance. In other words, if four grains of powder are required with the flash machine five feet from the subject, at eight feet there will be required a little over ten grains. This, of course, would apply strictly only with a naked flash, but even with the flash machine the worker will be surprised at the rapidity with which the amount of powder necessary increases as the lamp is removed further from the subject.

It might be explained that in securing the usual portrait lighting, the light falling at an angle of forty-five degrees, it is only necessary to so adjust the lamp that its distance from the sitter is approximately equal to its height above the sitter's head. As to the amount of powder required, the matter is quite simple. Depending upon the brand of powder used and the lens stop employed, somewhere between four and ten grains will be found right for the ordinary distance of five feet. Let us say it has been found that seven grains of the particular powder used give good negatives with stop f-6.3 and the lamp five feet from the subject. One will know just how much to increase the powder for a smaller stop by calculating each grain of powder as one second exposure and increasing the powder just as he would increase the exposure. However, the actual exposure, the duration of the flash, is somewhere between one-twentieth and one-fortieth of a second, depending upon the speed of the powder used. In altering the distance between lamp and sitter, the alteration in the amount of powder used should be in accordance with the difference between the square of the known distance and the new one employed, as explained above. The only other point to remember is that the fair-skinned, softly rounded faces of children require less powder than do the darker skinned and more angular faces of adults.

The beginner may have, as I did at the beginning, a few failures due to the flash and shutter not working in unison. If the shutter does not open full with the flash and close promptly, closed eyes may result. Whatever shutter is used, it must close on the instant, as practically all home portrait work is done in the daytime with the room filled with sufficient white light to permit impression if the shutter closes too slowly.

Let me impress on the reader that successful sittings must be made on the first visit. If it should happen that the proofs from the first sitting are unsatisfactory, no matter from what cause, the photographer will not again be accorded the same measure of confidence and esteem by that particular customer. The worker lacking experience in this particular line will do well to make a number of experimental exposures in his own home in order to acquire the necessary amount of skill and confidence.

The home portrait worker should be versatile, he should be able to put aside his preconceived ideas of lighting and posing, taking conditions as he finds them and making the best of them. While light falling at an angle of forty-five degrees is rightly considered as standard because employed quite generally by our brother artists of the brush, it must be remembered that we are in the habit of seeing people in a light having a more decided angle when meeting them in ordinary rooms. It should also be borne in mind that a pose that would appear

HOME PHOTOGRAPHY



AN EXAMPLE OF HOME PORTRAITURE

perfectly natural in a subject depicted in an easy chair amidst home surroundings would seem rather unsuited if permitted in the ordinary studio portrait.

While I advise and practice the carrying of backgrounds, the home portrait worker should use them only when the walls and furnishings of the rooms make so doing advisable. Even when that portion of the room directly behind the subject appears to be somewhat distracting, care in seeing that it does not receive too much light will cause it to come out quite subdued and pleasing. Frequently one can pose the sitter just outside an open pair of folding doors with the room

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behind somewhat darkened by drawing the curtains. This will give a good effect of a dark background having distance and depth and a background that cannot show any shadow of the sitter from the flash. Judgment should be used in selecting home backgrounds to see that nothing jars in the composition. One should include as little furniture as possible, only that necessary to give the picture the home effect. It is a mistake to spot out handsome furniture and feature it. Concentrate on the subjects, because what you succeed in getting of them is what influences the orders.



AT HOME PHOTOGRAPHY—A PLEASING GROUP

Some of the best home workers in the country work by daylight exclusively, even making large groups by window light. I personally know of a number of failures on groups, failures made by a fine operator unfortunately wedded to this method, groups that would easily have been made successful with flash exposures. It is only rarely that a subject objects to the flash after a demonstration has shown the slight noise made when using one of the modern flash machines, in which the small amount of powder used (a mustard spoonful being sufficient for a full-length figure at $f-4.5$), the explosion, only a slight puff, is negligible. It may be of interest to specify the outfit I have settled on after four years' experience, namely, the Halldorson. For convenience and cleanliness it is all that can be desired. It folds up most compactly and the cloth backgrounds can be folded and strapped to it, forming an outfit of only one unit.

The other unit is the camera case containing everything that is needed. My own is one that I had made by a trunk factory, so arranged that camera.

CONCERNING GASLIGHT PAPERS

plate holders, lens and small paraphernalia all fit snugly; and furthermore, it does not look at all like the conventional camera case. By using portrait films I can, owing to their lack of weight, carry eight double holders and several dozen extra films, and weight is an important item if outfit has to be carried any distance. The photographer taking up home portrait work seriously should have a small car, if possible, to get about with ease and comfort. An anastigmat lens is of course necessary, being suitable for large heads as well as for home effects in which the lines must be straight. My Wollensak Velostigmat has always done all that I have required of it and no lens could do more.

If any interested readers desire further or more detailed information on any particular feature of home portrait work, I shall be glad to respond up to the limit of my knowledge. Write me, care of the editor, and if necessary, I will reply in a second article covering such points as readers may want made clear.



Concerning Gaslight Papers

By William Albert



In less than the score of years since it was put on the market, gaslight paper has forged its way to the very first rank of popularity as a photographic printing process. As far as the amateur is concerned, it is far and away the most popular of all, having almost completely superseded the once-beloved printing-out papers in his favor. The celerity and ease of its manipulation, and the fact that it is possible to use it regardless of conditions of weather or light, perhaps account for much of this. To the old-timers, the best developing-paper print cannot equal the best work on printing-out paper, properly printed and toned; but the possibility of acquiring a fair proficiency in the handling of gaslight in quicker time than one can learn the correct manipulation of Solio or similar papers has endeared it to many.

In my estimation, another great factor contributing to its popularity is the fact that it will generally give a more brilliant and snappy print from any given negative than will printing-out paper. When we compare the flat and lifeless results that often characterized amateurs' prints in the days when gelatine-chloride or albumen was king, to the average exhibition of the present day, there is a marked difference. Undoubtedly, many of the tyro's efforts today are a swing to the opposite course of the pendulum and "make the judicious grieve" by their glaring harshness; still, of the choice of two evils, I believe I would choose the latter, in preference to the dull monotony of much of the old-time work. And I am not alone in this view—I have, by securing the opinions of many persons in various walks of life, persons totally unversed in photography, found that the sentiment in favor of brilliance as opposed to exquisite modulation of tone was almost universal. Show the average layman two prints on different papers from the same negative, one in just the right balance of tone, with glowing softness and atmosphere, and the other more contrasty or perhaps even harsh,

CAMERA CRAFT

and at least ninety per cent of your audience will choose the latter. This is right and proper: as long as humanity loves brightness as opposed to gloom, and as long as nature turns instinctively to the light, just so long will this love of brilliant pictures continue.

But this is decidedly off the track; this article was to deal with gaslight papers. I have in late years used many sorts of them, all American varieties, many English ones, and some of German origin, and find they are nearly all easier to handle than the makers' printed instructions would imply. For instance, these instructions almost invariably demand the use of an acid fixing bath, yet I have not found such a bath at all necessary to success under average conditions. No doubt in a hot climate it is a decided advantage in avoiding blistering, etc., but in the temperate zone, where the majority of us live, I find it generally superfluous. A fresh, plain hypo bath, strength about one in six, answers admirably in most places, while obviating the trouble and expense of preparing an acid bath. Formerly I used a short-stop solution between my developing and fixing, one consisting of a few drops of acetic acid or vinegar in a tray of water, but even this is unnecessary except in warm weather or in cases of over-exposure. A word of caution here: when using this acid short-stop, it is wise not to transfer too much of it along with the print into the hypo. The best way is to hold the print out of the bath for a few seconds until it drains off, then immerse it completely in the fixing bath. Often, especially in cool weather, I fail to trouble myself about any extra bath between developing and fixing, but transfer the print directly into the hypo after draining off the surplus developer, taking, however, care to immerse it quickly and completely in the latter. But this course is somewhat risky and I would not advise its indiscriminate use. In warm weather, to prevent too rapid an action, I usually make the developer only two-thirds or one-half the strength called for by the printed formula, only following the formula exactly in cold weather, in order to facilitate development. The makers lay great stress on the use of strong solutions in developing, but after many trials and experiments I have been unable to find any practical difference between the finished prints made in solutions as per formula and those only half as strong.

Many amateurs will withdraw a print from the developer several times in order to see if it is developed far enough, and then wonder why the resultant print is imperfect; the answer being: too much contact with the air. Keep your prints submerged all the time, either in the developer or fixing bath. While the print is developing, contact with the air will quickly stain it yellow or brown; and later, when saturated with hypo, contact with the air will reduce a print and make it raw. Be sure to lose no time in transferring a print from one bath to the next, and you will find many of your troubles obviated.

The yellow stain mentioned above is perhaps the beginner's most common difficulty. It can, of course, be prevented by adding a few drops of bromide to the developer, with a slight increase of exposure. But even experienced workers, on leaving a print too long in the bath in an attempt to force development, occasionally have these stains. I remember when I was learning to use gaslight papers, stained prints used to come in shoals, prompting me to try several experiments calculated to prevent them. I tried bleaching with indifferent success, and

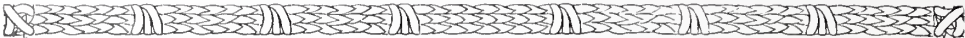
CONCERNING GASLIGHT PAPERS

then the brilliant idea of immersing them in a fairly strong bath of sulphuric acid occurred to me. This seemed an unqualified success; and, in my joy at having rescued the prints from a saffron perdition, I framed several of them. Alas! Within a week they had faded entirely away, "like the snowflake in the river." By accident, rather than by design, I later discovered the real remedy for these yellow stains. While developing one day, I found several stained ones in the batch and left them in the hypo some time, intending to throw them away. When I returned from dinner, to my surprise the stain had disappeared, and in later experiments I found that this was the cure for all but deep brown stains. An immersion of thirty minutes to an hour in a strong, fresh hypo bath will remove any ordinary yellow stain. I have never seen this recommended in print anywhere until recently in *CAMERA CRAFT*, and then, in my estimation, the writer did not sufficiently emphasize its great usefulness in saving many otherwise useless prints.

Another point upon which the manufacturers dwell is the necessity of a long washing after the fixing bath, recommending an hour or even more. This is all very well to impress the tyro with the necessity of thorough washing, but I never wash gaslight prints more than fifteen minutes. The point is, not how long, but rather how well the prints are washed. To chuck a dozen or more prints face down into a basin and let the water run in for an hour is not washing them correctly. Some years ago, Messrs. Lumiere of France published the results of experiments they made along these lines. They found that a dozen 5x7 prints could be thoroughly washed in a quart of water, every trace of hypo being removed. Their method was simply this: to pour into a tray just enough water to cover all the prints, and put them in, one by one, face down, pressing each print down with the open hand. From six to eight complete changes like this, requiring only a few minutes for a dozen prints, removed every trace of hypo, as they proved by chemical tests. By the way, I no longer go to the trouble of titrating my wash water in testing it for hypo. A quicker way is to touch the wet print to one's tongue, one soon learning to detect hypo by the taste.

Now a word as to permanence of prints. I believe that if we make photographs at all, we ought to make them to last. During several years I have thoroughly tested every dodge recommended in this article and can guarantee every one, excepting of course the bleaching and sulphuric acid baths, as furnishing a print that is as permanent as any gaslight print can be. I have repeatedly tested prints, made according to above instructions, as to their permanency. Some have been exposed to glaring sunshine in a show window for a year with no appreciable change except a slight yellowing of the paper that is entirely unavoidable, and occurring with any photograph under like conditions, no matter whether made by silver or platinum process. Some writers have attempted to cast doubts on the permanency of gaslight prints, but as far as my experience goes, they are fully as enduring as any other form of silver print.

Why suffer with ingrowing toe nails? A year's subscription to this magazine costs you only one dollar.



Persistence and the Photographer

By Chas. I. Reid



Advertising has made a great number of successful businesses in all lines, and yet there are many business men who look with doubt and suspicion on this method of increasing their business. The reason is easy to find if one only remembers the great number of itinerant advertisers in all lines of business, the photographer's business included. The largest and most successful businesses in all lines have been built up, not through advertising, but through persistence in advertising. Whatever the plan adopted to advertise a photographic studio, it should be carried out, not in a desultory and intermittent manner, but with a lot of persistence. One squeak of a mouse in a dark room will not enable us to catch it, but if the squeak is repeated at regular intervals, we can soon locate the source. The same with studio advertising. One advertisement does not make any effective impression, but if the advertising is coupled with persistence the prospective customers will see the advertisement again and again, with the result that the name of the advertiser will be fixed in their memory, and when thinking of photographs, they will remember the advertiser and his promises and will naturally turn to his studio to have their pictures made.

Having brought the customer to his studio, the photographer can then prove or disprove his advertising, and if he can deliver the good work promised, and perhaps just a little more than promised, he will have twelve more prospective customers. Desultory advertising is much worse than no advertising at all, as it gives an impression of uncertainty about the photographer and his business methods. No photographer need go far to find out the truth about this element of persistence in advertising methods. He cannot open a photographic magazine without also noticing the announcements of the successful manufacturers of photographic material, and it is a well-known fact that the persistent advertisers in this line are also the most successful manufacturers.

The principles of success in advertising are the same whether one sells raw material or a finished product. The photographer has many opportunities for advertising his business effectively and at little expense, opportunities that are not available to the business men in other lines. The local newspapers are only too glad to publish interesting samples of his work without charge, and if the photographer is liberal in furnishing the papers with pictures of local happenings, the publishers will retaliate with free reading notices which are by far more effective than paid advertising. This does not mean that paid advertisements are not to be included in advertising plans, but on the contrary, they should be used and used with persistence. It is by far better to use a small advertisement, one within the means of the advertiser, in every issue of a publication, than to use large spaces and use them only at intervals.

The mailing list, too, should be followed up with persistence, and persistence

PERSISTENCE AND THE PHOTOGRAPHER

should be used to keep the list up-to-date. The local motion picture theaters should have lantern-slide samples of the photographer's work, and these should likewise be used with persistence. Like every other kind of copy, they should be changed as often as possible. Mixing is another form of good advertising. The photographer should take an active interest in the affairs of his locality and let the people know that he is a photographer by mixing and getting acquainted with them at every opportunity. He should take an interest, not only in his own work, but also in the work and hobbies of those around him. People will often come to the studio of the photographer with an interesting personality



THE CORNER OF THE PASTURE

just to talk, and have their pictures taken as an excuse. Talk to a man about his hobby and he is yours, but talk about your own hobbies or work and he becomes only polite. For that reason, the good talker is the one who also knows how to listen.

And, in using other forms of advertising, do not forget the most important form of all, quality in the work turned out. If one cannot produce good work and do effective advertising at the same time, he should employ some one to do either the advertising or the work. One should take an active interest in improving the quality of his work and hold the producing end of the business up to the top notch of efficiency, doing it with persistence. A dozen photographs often go into as many different homes, and no matter how effective one's other methods of advertising may be, if the work is poor, the advertising only serves as a reminder of that photograph made by you.

To make a success of one's business, it is necessary not only to get the customers, but to hold them. Quality in advertising is important as well as quality in the product. If one makes good photographs, he should not attempt to sell them through poorly worded copy or poor advertising literature, but he should demand the very best that can be produced. And, after one has used the

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usual methods of advertising, it is well to remember that originality attracts attention and if a new plan can be invented, so much the better, particularly if it is a good plan and includes persistence.

Be consistent as well as persistent. The public holds the advertiser responsible for all claims, and if one knows a thing to be so, he should have the courage of his convictions and say why it is so. Once let the public learn that the advertiser's statements are true and consistent, and he has secured one of the most valuable assets on his books. No one can build a permanent business on exaggerated claims, for exaggeration is a very flimsy foundation and one that is liable to succumb at any moment. Enthusiasm is another very valuable asset and one that has built many a successful business from a small beginning. The enthusiasm that builds big businesses is not the uncertain and intermittent kind, and the wrong kind of enthusiasm will not enable one to achieve success any more than will the wrong kind of advertising. Quite recently a certain man has tried to sell me stock in three different million-dollar enterprises. This man has lots of enthusiasm, but it is of such a kind that he is regarded as a joke among business men. The right kind of enthusiasm, however, rightly backed up, will enable one to achieve almost any degree of success.

The sense of beauty necessarily underlies the spirit of art, and doubtless gives the primary impulse to all who desire to record the sights that have impressed them. Like the sense of humor, it seems to defy analysis. Both, undoubtedly, are closely bound up with temperament, are found in different people in varying degrees, and have the common faculty of inducing new emotions that take us out of the commonplace. Humor has been explained as an excitation of unaccustomed sensations, causing a flow of energy in new channels to the general awakening of joy. Beauty has been said to result from the gratification of a love of order, instilling a feeling of rightness. It has also been associated with an hereditary intimacy with Nature, the bequest of primeval man.—ANTONY GUEST.



How One Can Sell His Photographs

By Harry F. Blanchard



With Illustrations by the Author

It has been said that the right photograph, placed with the proper editor, can be cashed as easily as can a check handed in at the bank, and I candidly believe the statement is absolutely correct. But the photograph must be the right one or at least one of the right kind. I have advertised for photographs for the last year, only to find it practically impossible to get what I want. It seems, at least with me, to be almost fruitless advertising. For example, I



A GAME OF MARBLES

I realized ten dollars each for these subjects just because they told a good story.



SOME CIRCUS PERFORMER

advertise that I want child-study photographs, finished on glossy paper, not smaller than 4x5, if larger the better. Nine times out of ten I am sent a lot of dull-finish pictures or even blue prints, still smaller than 4x5. Of course I am obliged to return them on account of both their small size and because they will not make good clear halftones suitable for magazines or other publications, even if the subjects are pleasing.

In my advertising I have found it particularly difficult to secure photographs that were really suitable for farm paper covers. For example, a well-advanced photographer wrote me asking what kind of pictures I wanted for the publications I had in mind. I immediately replied that I desired prints or enlargements on glossy paper, ones that were quite sharp and clear, in size not smaller than 8x10; and, as they were to be used for cover illustrations for farm papers, the subjects should be agricultural in character. In good time I received six enlargements of the required size, beautiful pictures to hang on the walls of a home, but entirely unsuited for cover illustrations and especially inappropriate as farm paper covers. Out of the lot of six there was only one that could rightly be called a farm subject, a brook with two cows drinking therefrom, the other five being landscapes that would not find a place on the cover of a farm

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THIS IS THE HEAVIEST

Orange Judd Company paid five dollars each for these for farm paper covers.

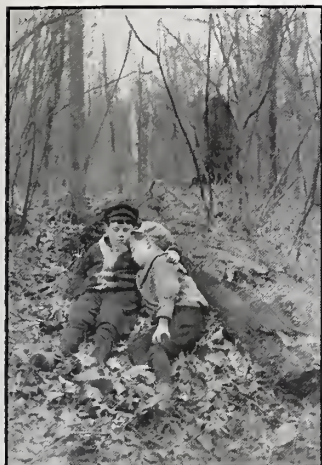
WHICH DO YOU WANT?

publication once in five hundred times. The enlargements were not on glossy paper, but on a velvet surface, and they were not at all sharp and clear, the maker evidently having tried to produce something in the way of atmospheric, soft effects. They were excellent examples of artistic photography, but they were not in the publication class. As I said before, photographs for any kind of publication purposes should be sharp and clear, and if possible, printed on glossy paper. Once in a while a semi-glossy print will answer, but it is never quite so good as it would be were it on a smooth surface.

Of course it is sometimes almost impossible to get farm subjects arranged so that they will have a suitable background. In such cases one is compelled to make the exposure with things as they happen to be, endeavoring to get the figures so attractively arranged that the editor will overlook the background by reason of the subjects being so well posed that they catch and hold the attention. Rather, he himself is quite sure to notice the poor background, but he will reason that the reader will not, and he therefore accepts the picture as suitable for the cover of his publication.

In some cases, when an editor likes the composition and arrangement of the subjects, but does not like the background, the halftone maker can remedy matters by taking out the offending background and putting a suitable one in its place. While this can be done, it is costly and the result is not always satisfactory. If one can possibly arrange to have suitable backgrounds in his pictures, he will be well repaid for his trouble, as the least work that has to be done on a photograph the better chance it has with the editor.

HOW ONE CAN SELL HIS PHOTOGRAPHS



BABES IN THE WOODS

WHISTLING HIS THOUGHTS

ON CHRISTMAS MORNING

I realized ten dollars each from these negatives from Sunday-school papers, and later sold the negatives to advertising firms for five dollars each.

And, above all, do not try any of those soft, misty effects, as they will not pass with the editor of a farm publication. One might make one of the most beautiful agricultural genre pictures that was ever produced, but unless it be sharp and clear, he will have wasted his time and efforts, at least as far as having it published on the cover of a farm paper is concerned.



THE ONE THAT GOT AWAY

Three Sunday-school papers paid me five dollars for prints from this negative, as did the Kaye-Mann Company, of Detroit, who used it for advertising purposes.

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Well, it may appear that I am getting away from my subject and as a reader you may say you have been told all this before. Please believe me when I say that the point is one that needs a lot of consideration. When one reads an advertisement stating that some particular firm or paper manufacturer wants certain kind of photographic illustrations, one cannot expect them to retain any kind of pictures that he might send in. They want what they want, when they want it. When one sees an advertisement asking for photographs, it is printed because the advertiser has a special and an immediate use for them. Consequently it is advisable to send in promptly just the kind of photographs asked for, as nothing else will do.



THIS PICTURE I CALL MY BANNER SNAP—It won the Third Prize of seventy-five dollars in the Eastman Kodak Company's Annual Contest.

Illustrations often explain better than do words, so I may be pardoned for showing several examples of what I might call successful, because salable, pictures, together with data covering their production. These will enable one to see about what the magazines want and will use. All were taken with an ordinary rapid rectilinear lens and made on 5x7 plates.

The camera lens and six plate holders, the complete outfit with which these pictures were taken, cost me twenty-five dollars. This goes to show that one does not require an expensive outfit to do extra good work. However, the most successful pictures are made with a lens of the anastigmat type, costing from eight to ten times as much as does the rapid rectilinear lens. The one with which these illustrations were made cost about six dollars, shutter and all, while an

HOW ONE CAN SELL HIS PHOTOGRAPHS

anastigmat lens of similar size would cost about fifty or sixty dollars. For this kind of work I very seldom use an opening larger than f-8 and I stop the lens down to f-32 whenever possible, as I can then make 11x14 enlargements suitable for magazine covers, these last bringing a much higher price than the small photograph.

In the matter of exposure, I must confess I am not very much given to hair-splitting exactness. I prefer, as long as results are satisfactory, to burden myself as little as possible with anything that requires attention aside from the subject itself. I can only give you the shutter speed and opening which I always use, either



READING THE NEWS—A picture that brought me in dollars.

winter or summer, and with me it always works out perfectly satisfactory for both enlargements and contact prints. For a group of people or similar subject that nearly fills the plate, posed in the shade or containing considerable shadow, I use f-8 stop and give one-fifth second exposure on a Seed 30 or Cramer Crown plate, and I get a fully timed negative every time unless the day is extremely dark, then I give one-half second. If I wish to make the same kind of a subject with a smaller opening and the same kind of plate, I stop down to f-32 and give from one-half to one second. I find that either of these exposures always results in good negatives.

The picture of the boys playing marbles and the one of the boy on the stump telling how large the fish was that got away, were both taken in bright sunlight, stop f-32, Cramer Crown plate, one-half second exposure. They were developed

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GOOD FISHING

The Ansco Company paid me five dollars each for these negatives to make prints from showing how pictures look on their different grades of paper.



SOME PUMPKINS

in an Eastman plate tank with pyro developer and printed on a soft paper so that the highlights would not be too harsh.

It may seem queer, my giving one-half second in the shade and then turning around and giving the same exposure in bright sunlight, but the truth remains that had I given a shorter exposure to the group in sunlight, the shady portions of the face and body of the principal figure would have printed almost jet black, spoiling the picture. I expose for the shadows whenever possible, allowing the highlights to take care of themselves. Pictures taken in this way should be printed on a soft grade of glossy paper when intended for illustration purposes, except, if they are to be sent in to a daily or other publication that is printed on the cheaper or rough-surfaced paper, it is nearly always advisable to send more contrasty prints, as they reproduce best in newspaper work.

The reason that this article is illustrated with child subjects is because they are the easiest kind of genre pictures to secure. However, if one is fortunate enough to be able to get good genre studies with older people as subjects, these, if well done, will have a more ready sale.

The story-telling quality of a photograph is what counts with a publisher. One can take a dozen plates and fire away at different groupings of children or grown-ups, and, unless lots of pains are taken to get some sort of human interest into the arrangement of the subjects there would hardly be more than one fairly composed picture out of the lot. The photographer might wonder why more of his pictures did not sell, but the simple reason is that the composition does not tell a story, the picture lacks that element that makes it interesting. Composition

THE USE OF COLOR SCREENS

means arrangement and this last means the securing of some definite effect. Unless the photographer knows what he is trying to secure, he cannot hope to make good story-telling photographs. Only once in a while is a good genre picture secured by mistake; that is, without definite aim.

One should study the requirements of each and every kind of publication he may try to supply with pictures. Before sending in a lot of prints to an editor, one should try to find out if that individual will be likely to find use for them by buying a copy of the publication and examining it closely to see if it is using any illustrations similar to those one has to offer. By this I mean the same kind of subjects; then, if one thinks that he has the material, he should send it in to the editor's office. If they be good, clear, glossy prints and the editor is wide awake and appreciates the subjects, he will possibly make a reply within a few days after they reach his desk.

In this article I have tried to show, mainly through the illustrations furnished, the kind of pictures one should make in order to be able to sell them to publications. In my next article I will try to give the reader some idea as to the kind of pictures the technical journals want, again using as illustrations a few of my own photographs that I have considered successful because they found a market.



The Use of Color Screens

By B. F. Loomis



With Illustrations by the Author

Since the first eruption of Lassen Peak on May thirtieth, 1914, more than a hundred camera users have brought their outfits of various descriptions to this point and "fired away" at this interesting subject. Some secured pictures,—good, bad and indifferent; while a large number secured only experience. Some of these, fairly well versed in photography, told me that when the peak was covered with blue ash, it blended into the sky so completely that it was almost impossible to photograph it successfully. Of course, they were using ordinary plates or films and using them without a ray filter or a color screen. Some few succeeded in getting good pictures of the eruptions without employing color screens, but these were the exceptions. Color screens are always beneficial, and frequently indispensable, especially when the view is a very distant one, and the greater the distance the darker should be the ray screen used. Cloud effects are best obtained with quite dark screens, although they have the disadvantage of rendering the blue sky very dark. A light screen gives pleasing landscapes, while much of the clouds is lost. All the pictures accompanying this article were made with a deep orange, Bausch & Lomb ray screen (commonly called a "three-time" screen), with the exception of the one copyrighted in 1914, on which was used a light yellow screen, the "medium" of a Goerz set.

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MT. LASSEN FROM ANDERSON, CALIFORNIA

While taking the picture, "Mt. Lassen from Anderson, California," the mountain being some fifty miles distant, a lady asked me what kind of lens I was using. I replied: "A Bausch & Lomb Zeiss." She then explained that she was working with a Seneca, that she had tried several times to get a picture of Mt. Lassen from that point, but had never had any success. Some one had told



ERUPTION OF MT. LASSEN, JUNE 16TH, 1915—Copyrighted 1915 by B. F. Loomis. Two seconds' exposure, f-22. B. & L. orange ray screen, Cramer's Instantaneous Iso plate.

THE USE OF COLOR SCREENS



TOP OF LASSEN PEAK, LOOKING TOWARD MINERAL POINT—Site of Look-out House battered into splinters by the eruption of October 17th, 1914.



ERUPTION OF MT. LASSEN, JUNE 9TH, 1914—Copyrighted 1914 by B. F. Loomis. Made on Instantaneous Iso plate, Goetz medium screen.

her that her lens was not *strong* enough. She then brought out her camera, equipped with a beautiful 4x5 telephoto lens. I assured her that her lens was just as strong as anybody's, and explained that the cause of her failure was no doubt due to the fact that she was using an ordinary fast plate without a ray screen, making it practically impossible to get the pictures with even this excellent equipment. I further explained that when the ray screen is used it is best to employ color-sensitive plates; and, if the view be a very distant one, a double-



PATH OF THE FLOOD FROM LASSEN PEAK—Copyrighted 1915 by B. F. Loomis. The timber which once covered the foreground has all been swept away. Two seconds' exposure, f-22, B. & L. orange ray screen, Cramer's Instantaneous Iso plate, May 22nd, 1915.

coated plate is even better. This particular picture referred to I made with a Wratten & Wainwright Panchromatic, a double-coated, color-sensitive, backed plate, and eight seconds' exposure was given at f-45. These plates, on very distant telephoto views, give better results than anything I have tried, but on near views, those made around the volcano, I had better results with Cramer's Instantaneous Iso plates. I do not mean to say that other makes of similar plates are not just as good. Many excellent brands I have never tried, but I can safely say that Seed's 26X for general use, Cramer's Instantaneous Iso for cloud effects and nearby mountains, and the Wratten & Wainwright Panchromatic for very distant telephoto work, make a splendid trinity that, in my hands, meets all requirements; at least, that is my verdict after some fifteen years of experience.



PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

MAKING OUTDOOR PICTURES FOR PROFIT: My long experience in the photographic business impels me to make a few suggestions that may assist the reader who desires to make pictures for profit. It is all right for the advanced amateur to go out to the park, or even further afield, and shoot away his plates or films on more or less pleasing views, if he can afford it. But the average worker finds it all right for only about three or four choice views, and possibly he can make such pictures suitable for the newspapers and magazines. Again, if one has a good 5x7 outfit, with sufficient plates, he can often pick up, among the host of people who visit the parks and other public resorts, requests for "pictures" of small groups and the like that will afford a number of orders for prints therefrom.

There is also money in street work, providing one has a good 5x7 view camera with a $3\frac{1}{4} \times 5\frac{1}{2}$ or post-card back fitted. Such a camera makes a complete outfit, as the $3\frac{1}{4} \times 5\frac{1}{2}$ plate is the proper size for post cards, upon which all kinds of subjects can be made, including everything from a single portrait to a family group. The 5x7 plate is the ideal one for store fronts, residences, factory groups and the like. These last are best made about five in the evening when the men are dressed up and ready to go home. I have used an 8x10 camera for this kind of work, but if one has only a 5x7, he no doubt can make as much, because the pictures will sell more readily on account of their lower price. The office help should be placed in front, the ladies all seated, and one must not overlook the proprietors. These last should be seen and solicited for an opportunity to do the work. One must give them a few pictures free of charge, as this will induce them to put men to work arranging seats for the group. Have a row of chairs

PARAGRAPHS PHOTOGRAPHIC

in front, next a long plank with its ends resting on two barrels, and the third seat, if another is necessary, elevated about the same distance above the second. A good picture can always be secured by taking a little time in arranging the group. If one will do this and also take pains to properly develop both the plate and the prints, he will have no trouble in getting a large order.

When soliciting a chance to do such work, I always had some good samples to show the people and found that it was only necessary to produce the quality of work demanded and they were perfectly willing to part with their money. On good days during summer and fall, the street worker must hustle out early and work late, but by no means waste plates making exposures between eleven a. m. and two p. m., as there are then too much top light and too short shadows. As the shadows get longer, the lighting is better for pictures; the best group picture I ever made was exposed about five-thirty p. m., or just before sundown. The ideal position for an outdoor group is facing the north, with those making up the group seated on the front steps or in the shade of a building.

For my own work I have been using Stanley plates, mainly because their formula for pyro developer is so handy and convenient to use. Makers of other plates would do well to publish a similar one in their formula sheets. Only three sixteen-ounce bottles are required to mix up the necessary stock solutions, with which one can so easily alter the proportions to secure the best results from his exposures and bring out the best the emulsion will give. The formulæ for the three stock solutions are as follows:

A: Water	16	ounces
Potassium metabisulphite	90	grains
Pyrogalllic acid	1	ounce
B: Water	16	ounces
Sulphite of soda.....	1½	ounces
(Hydrometer test 60)		
C: Water	16	ounces
Carbonate of soda.....	1¼	ounces
(Hydrometer test 40)		

To develop, take one ounce of each of the stock solutions and seven ounces of water. Care should be taken to avoid, if possible, the use of water from a well or spring, as such is frequently inclined to be very hard, and when so, is not well suited to the making up of a developing solution.

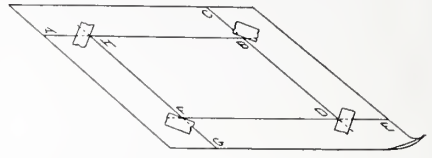
For my printing paper I use glossy Cyko; and, after washing, I squeegee onto a ferrotype plate that has been well dampened. After placing the wet print face down on the plate, I cover with a blotter and go over it with a roller squeegee. Prints so finished sell better and I find my customers always prefer them to dull finish work. While the new Cyko formula is very simple and convenient, I am quite particular in making it up

This last, and the proper timing of the exposure in making the prints, I believe are most important.—G. S. Smallwood, Chicago.

CUTTING MASKS WITH A PRINT TRIMMER: The cutting of masks with the sides of the openings perfectly parallel and true is, when gone about

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in the usual way, more difficult than it would seem. In order to secure true and clean corners, the usual practice is to cut a little way into the mask and then cover these extended cuts, and also strengthen the corners, by placing a bit of gummed paper or lantern slide binding diagonally across their outer edges. Doing this gave me an idea I could use my print trimmer to make the cuts forming the sides of the opening and thereby assure perfectly right angles at the corners and perfectly parallel sides. To cut a mask, first trim the opaque paper to the proper outside dimensions. Then cut from A to B, cutting a little beyond the line C D, placing sticker at I; next cut from C to D beyond E F, placing sticker at J; the next cut is from E to F, beyond G H, with sticker at K; the last cut being from G to H, beyond line A B, with sticker at L; and, as the first or I sticker has been cut, another should be placed at that point.—W. H. B., Maine.



TO PRINT ON MARBLE: Coat an unpolished plate of marble with the following solution:

Benzine	500 parts
Spirits of turpentine.....	500 parts
Asphaltum	50 parts
Pine wax	5 parts

When dry, expose under a negative, which will take, in direct midsummer sunshine, about twenty minutes. Develop with turpentine or benzine and wash in plenty of water. Then cover the plate where it is intended to be left white with an alcoholic solution of shellac and immerse the plate in water which is colored with any dye which will dissolve in water. After a while, when enough coloring matter has entered the pores of the stone, it is taken out and polished. The effect is said to be very pretty.—T. E. P., California.

TO REMOVE FOG: If the negative you have just developed is fogged from any cause, reduce it with red prussiate of potash and hypo until it is too thin to produce good prints; then thoroughly wash and strengthen by first putting into a strong solution of bichlorid of mercury until the image has become quite pale, when wash and immerse in a weak solution of sulphite of soda until the plate has lost all the whiteness given it by the bichlorid and it looks clear in every part. All the fog will have disappeared and the negative will be a good one.—T. E. P., California.

SHOWING PROOFS: The photographer will do well to avoid any danger of showing his customers proofs that he may not be able to equal with the finished print, as so doing is quite sure to cause disappointment, while, on the other hand, the delivery of prints that are plainly better than the proofs shown always create a good impression. If there is any doubt on the part of the photographer in this matter, he should make his proofs on a different grade of paper and on a grade that will not give quite as good prints as the grade on which the finished product will be turned out.—J. B. W., Ohio.

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A PHOTOGRAPHIC MONTHLY

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No. 3

That Competition of Ours

As announced in a recent issue, the closing date of our Farm Paper Cover Competition was set for December thirty-first last. This we found was a rather inopportune time for getting together a jury, and it was not until the February issue was practically printed that we succeeded in getting together three competent local men to select the winning picture. One of these gentlemen has been identified with an agricultural publication for a number of years, another is an advertising man with a keen appreciation of what is "telling" in a picture, and the third is an artist who has produced, by both pen and brush, some very effective magazine covers.

The poor showing made by the pictures sent in has caused us to abandon our original idea of reproducing the best, there being none that really came up to the requirements of the average farm publication, despite the fact that over twelve hundred prints were received, including many worthy of salon honors. Our jury, in response to our request that at least the nearest approach to a desirable picture to grace the cover of a farm paper be decided upon, selected one, by Miss Belle Johnston, of Monroe City, Missouri, and we have forwarded her our check for five dollars as an award.

Our lack of success in bringing to light pictures of the kind indicated had about discouraged any repeated attempt along this line, when a letter came from one of our readers, an old correspondent, who put the matter in a little better light. He explained that it was only when the closing date was near at hand that he obtained a clear idea of just what was wanted and by that time winter was upon him, rendering the making of suitable negatives practically out of the question. Then another letter came, and a third, and still others, all of like character; one reader going so far as to suggest that we seemed ignorant of the fact that our own winter sunshine and flowers were not characteristic of the Eastern States. Therefore, a new competition is announced below, and we trust most sincerely that we may be able, at its close, to reproduce some excellent prize-winning pictures and to learn that our efforts to promote interest in this line of work have resulted in added interest and enjoyment for at least a few of our readers.

Our New Competition

Like the one just closed, there will be no rules or restrictions. We want our readers to show what they can do in the way of producing pictures suitable for cover illustrations for farm papers. Send contact prints from negatives of a quality that will permit of sharp, clear, 11x14 enlargements being made therefrom. While we will not undertake to return any prints, we assure senders that no use will be made of their pictures except as we may wish to reproduce a few in small size to show what is being submitted or to more clearly define what is

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wanted. In this issue is an excellent article that gives many good hints on the subject, and in our next we will advance a few suggestions of our own. The closing date will be announced later and awards, if other than a simple announcement of the best pictures, will be most modest. We are not asking our readers to enter their prints in this competition in order to win a prize from us. We want to encourage them to take up a line of work that is eminently suited to the opportunities so many of them enjoy, to the end that they may win their own approval of effort intelligently put forth, to say nothing of the reward the actual sale of suitable pictures may bring.

Farm Scenes Wanted

Harry F. Blanchard, whose excellent article appears in this issue, is at all times besieged with a few more orders than he can himself supply, having only spare time to devote to the work. He has, at the present moment, demands for about twenty-five good pictures of farm scenes, 5x7 or larger, and he desires to purchase the negatives of such as he may select as suitable. He particularly wants to secure a good negative of some cows or sheep near a stream of water, either as an upright or a horizontal view. Mr. Blanchard, we are certain, is perfectly trustworthy and reliable; and, while he may not be prepared to pay any fancy prices, our readers can feel quite sure of fair treatment and the return of any prints they may send for his approval if they will but enclose postage for the purpose. However, we would suggest that he can hardly care to consider other than good prints of good subjects of clearly agricultural character, 5x7 or larger, that have not as yet been published. Story-telling pictures, those containing human interest elements, are no doubt what he requires.

George Murphy Again In San Francisco

Once more, after the lapse of three or four years, we have had the pleasure of a visit from the genial dean of the New York dealers, George Murphy, of 57 East Ninth Street, that city. Despite his serious illness of some months ago, Mr. Murphy appears in the best of health and spirits and reports improved business in the photographic line as fully confirming the promised increased prosperity throughout the country. He is, together with his most estimable wife, spending several weeks at the home of their son in this city. Between his large circle of friends and his wide business acquaintanceship, if indeed the first classification does not cover them all, he has been kept quite busy, a situation that he seems to enjoy to the fullest extent.

Defender Representatives Goes Abroad

W. H. Salmon, of the Defender Company, sailed, the latter part of January, for Europe for a four months' stay, in connection with the interests of the Defender Photo Supply Company, of Rochester, New York.

I do the very best I know how—the very best I can; and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything; if the end brings me out wrong, ten angels swearing I was right would make no difference.—A. LINCOLN.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

The Simple Arithmetic of Enlarging

In the following notes I propose to put the practical part of enlarging in the simplest possible form, so that anyone who knows the first four rules of arithmetic can answer his own questions himself.

The first thing to be clear about is that the scale, degree, or ratio of enlargement is practically always reckoned as "diameters." Suppose we have a quarter-plate, which we will reckon as 3x4, and wish to enlarge it to 6x8. Thus each of the dimensions, length or width and height, is just doubled or enlarged two times; this would be called two diameters, although you could cut a 6x8 piece of paper into four pieces each 3x4. Again, 3x4 enlarged to 9x12 would be three diameters, or three times linear, as it is sometimes called. Or we could say the ratio or scale was three to one.

Now suppose we arrange our apparatus to give a three-times enlargement, i. e., 3x4 to 9x12, and yet only use a 6x8 piece of paper for part of the picture, still we should say it was a three-times linear enlargement. We do not reckon by how big the enlarged print is, but by how big it would be if the whole negative had been used.

Having settled the ratio or scale of the enlargement, the governing factors as regards distance of lens to negative on the one side and lens to print on the other are the focal length of lens and total available distance. For instance, suppose the desired ratio to be three (i. e., three diameters or linear), then the lens to print distance will be three times the lens to negative distance, whatever the focal length of lens may be. Get this point quite clear in your mind; viz., the ratio or proportion of lens to print distance compared with lens to negative distance is always the same as the linear size of print to that of the negative. We are here assuming by print size the full possible size of the negative.

Now here is a simple and general rule: the

lens to print distance is ratio plus one times the lens' focal length. Suppose, as just stated, the ratio is three and the focal length of lens five inches. Then the lens to print distance is three plus one, i. e. four, times focal length, or twenty inches.

Do not make the common mistake and say, "Ratio plus one times focal length" is three times five plus one, i. e., sixteen; but say, three plus one, i. e., four, times five, viz., twenty.

We have just seen that the lens to print distance is always ratio times the lens to negative distance; therefore in this case twenty is three times lens to negative distance, which must consequently be six and two-thirds inches.

We now have the key to all likely problems. It will be useful to work out a few cases: I have a five-inch focus lens; what is the ratio when it is six inches from the negative? It will save time and talk to adopt the following letters as abbreviations: R=ratio, scale, diameters; F, focal length of lens; P, print to lens distance; N, negative to lens distance; B, baseboard, i. e., total negative to print distance. Obviously B is P plus N. Also P divided by N gives us R. And R plus one multiplied by F equals P. Or P divided by R equals N.

From the above it is easy to deduce a very useful formula that is but seldom met with, and which, indeed, I cannot recall having seen in print; it is R equals F divided by N minus F. That is to say, that the ratio is the focal length divided by the camera extension beyond focal length. To take the above case: Camera or lens to negative length N is supposed to be six inches, i. e., one inch more than the focal length. If we divide focal length five by one, we of course get five, i. e., the print will be five times the size of the negative. Suppose we have an eight-inch lens twelve inches from the plate, i. e., four inches beyond focal length; then eight divided

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by four gives us two, or the print is two times the negative. Suppose the same lens to be ten inches from the negative, i. e., two inches beyond the focal length, then eight divided by two gives us four, i. e., print is four times the negative.

My work bench is five feet or sixty inches long. I want to enlarge 3×4 negative to 16×20 . What focal length of lens is required? First we notice that twenty divided by four gives five, so 3×4 enlarged five times is 15×20 , not 16×20 . In other words, 3×4 and 16×20 are not quite the same shape or proportion of length to width. Let us say the required ratio is five. Then P must be five N, or the base length is N plus P, i. e., N plus five N, or six N. Then six N equals B, equals sixty, or N equals ten, and P is fifty. Next P is R plus one times F, i. e., five plus one times F, i. e., six times F. Therefore fifty divided by six is F, or F equals eight and two-sixths. In practice—so as to give ourselves a little “elbow room” in final adjustment—we should select a lens of focal length rather shorter than the above, say eight or seven and one-half inches.

I want to mark the baseboard of my enlarger in such a way that I can read off at a glance the scale of enlargement or ratio. This we can easily do in two ways: first by noting the N distance and then using the above little-known formula. For instance, suppose we are using a five and one-half inch lens. When N is six inches, the extra distance—i. e., beyond F or five and one-half—is one-half, and this divided into five and one-half goes eleven times. When N is six and one-half, the extra distance is one, and this goes five and one-half times, and so on. In a similar way, we can scale our distances by observing P from another little-known formula: P minus F divided by F. But we are more likely to want to scale our lens to negative or N distance in such a way that we can set the apparatus for a given ratio. For instance, the lens is six inches focal length, and we want to enlarge three diameters. We can easily do this from the formula: N equals F plus F divided by ratio. In this case, N equals six plus six-thirds, equals eight; or for ratio two then N equals six plus six halves, equals nine, and so on. Or we may prefer to scale the longer distance P. This we easily get from P equals (one plus R) times F, equals F plus R

times F. For instance, with a four-inch lens and two and one-half ratio, P equals four plus two and one-half times four, equals four plus ten, equals fourteen. For this it is convenient to calculate the P distances, and then mark them on a yard stick or blind-lath. It is easier to get accuracy by scaling the longer distance P than N.

I want to build a fixed-focus enlarger for making postcards from $3\frac{1}{2} \times 2\frac{1}{2}$ negatives, and use a five-inch focus lens, etc. First we must find the ratio R by dividing the postcard $5\frac{1}{2} \times 3\frac{1}{2}$ by $3\frac{1}{2} \times 2\frac{1}{2}$. Now the negative and card are not quite the same shape, the former being the more square-like of the two. We must therefore divide the shorter side of card by shorter side of negative to get a ratio which will include all the negative, i. e., three and one-half divided by two and one-half, or seven by five, or seven-fifths. Next P is (one plus R) times F; i. e., P equals F plus seven-fifths times F, or five plus five times seven-fifths, equals five plus seven, or twelve inches. N equals P divided by seven-fifths, or P times five-sevenths, equals twelve times five-sevenths, equals eight and four-sevenths inches.

I have half-plate camera with twelve-inch bellows, and $3\frac{1}{2} \times 2\frac{1}{2}$ camera with six-inch bellows and five-inch lens. Can I use them tandem for enlarging $3\frac{1}{2} \times 2\frac{1}{2}$ to $6\frac{1}{2} \times 4\frac{3}{4}$? In this case we may reckon the two sizes as being practically the same shape. Thus six and one-half divided by three and one-half, i. e., thirteen-sevenths, gives us R. Here P equals (one plus thirteen-sevenths) times five, equals (two and six-sevenths) times five, or fourteen and two-sevenths inches. N equals (one plus seven-thirteenths) times five, equals twenty-thirteenths times five, or seven and nine-thirteenths inches. So that in neither of these two cameras is the bellows long enough for use with this lens in the suggested way.—“Onlooker” in *Amateur Photographer*.

Controlled Bromoil-Transfer

I know of no photographic printing process that exercises such a strong fascination to a worker with artistic aims as bromoil does. This attraction is mainly due to the great scope this process opens for the introduction of individuality and character in one's productions. But, in my case at least, it is also due to a feeling of uncertainty—unavoidable even after two years of practice—that seldom

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permits me to anticipate the completion of a picture exactly as contemplated; it is often after the second or third attempt only that I can secure the result I had deliberately aimed at. This may be a personal feeling, after all, resulting from the handicapped conditions under which I started my bromoil essays, for, as a matter of fact, I had never seen an original bromoil print nor had I watched a demonstration of the process, which was totally unknown in Egypt. I ordered the necessary materials from England, and commenced by groping my way, ever seeking assistance in the valuable text-books written by Mortimer, Puyo and Hewitt.

But this peculiar attraction is lost as soon as automatism steps in, and this is specially the ease when one faces the transfer process by means of the roller-press. The feeling of pleasure gives way to painful anxiety at the expectation of what will come out of the indiscriminating machine, that, more than often, acts too powerfully where it is not wanted to, and quite inadequately where it is desired to produce strength.

It was therefore natural that experiments were attempted to try to rid the transfer operation of its purely mechanical action and to submit it to the worker's free control. The method I have adopted, besides its satisfactory results, presents at the same time the advantage of economy.

First of all, let me say that the transfer process is by no means suitable for any and all sorts of pictures; I find that for certain strong effects where darks cover large areas, the slight luster of the untransferred greasy ink gives more vigor and depth than the matt transferred pigment.

The bromide print must be light and well graduated, but without harshness, and above all not over-exposed, as there is always a danger of clogging the shadows in the pig-menting stage. The sort of developer used, and degree of dilution, are immaterial, amidol, metol-hydroquinone, or a concentrated developer such as Johnson's "Azol" used in a much-diluted form, giving good results. The print is fixed in a neutral twenty per cent hypo solution, and then carefully washed and dried.

It has frequently been said that the bromide print must be a recent one, lest some hardening in the emulsion should interfere with the proper swelling of the gelatine.

From my experience I think it is not the print, but the bromide paper, that should be of a recent manufacture; in other terms, the print may be as old as the paper itself, but the latter must have been freshly coated; hence the necessity of getting it from a dealer whose stock is frequently renewed. As for the kind of bromide paper to use, I have found that the brands that, while not glossy, have some luster about them are preferable, as the dead matt varieties seem difficult to manage. Personally I prefer Kodak's Antique, white and tinted, and Wellington's Cream Crayon smooth; these papers have, at the same time, the advantage of being substantial, thus resisting well the necessary wear and tear of the transfer operation.

On the dry print, mark with a pencil, right across the sheet, the lines forming the four limits of the final image; this will allow of an easy trimming between the pig-menting and transferring stages, as will be explained further on. Then turn over the print, place it against a window pane, and trace with the pencil, on the back, the outline of the image; this rough pencil drawing will help to guide the hand to give the different degrees of pressure during the transfer.

The print is then bleached in Sinclair's bleacher used at normal temperature and washed in several changes of water to rid it of the bulk of yellow bleacher. It is then left in a dish of water until it acquires the necessary degree of swelling. Fixing the bleached print in hypo can be entirely dispensed with; the object of fixing being only to prevent further darkening of the white silver salt, this is not necessary since the pig-ment alone will be carried onto the transfer paper. It is most important to find the correct degree of swelling required for each print in view of the effect aimed at; this degree is obtained by a gradual raising of the temperature of the water in which the bleached print has been left to soak. I have a jug full of hot water at hand, and pour very little of it at a time in the cold-water dish—lifting of course the print out of the dish; these successive additions of hot water must be repeated, say every five minutes, until proper relief is obtained, which will be known by experience, and is best judged by the line separating the image from its white margins, where it should show somewhat strongly. As I have already stated, a newly

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manufactured emulsion swells very easily, while an old one requires considerably warmer water. During our hot summer days out here, I have been able to obtain any amount of relief, on a fresh paper, by leaving it in water at normal temperature for a longer time without any addition of hot water.

The correct swelling being once obtained, the print is carried onto the wet pad, the surface water mopped off, and the pigment applied. The inking must be done quickly, and the medium used to soften the pigment on the palette should be one of the slow-drying variety, such as Sinclair's bromoil medium. Contrasts must be exaggerated in order to counteract the further evening-up of the values in the transfer, the reasons for which have been explained by Demachy in his admirable description of his process of oil-transfer.

When pigmentation is completed, the print is lifted from the pad and placed on a sheet of clean glass, where the trimming is done; this is very easily effected with a straight-edge and a very sharp blade—I use a razor blade—cutting along the pencil lines previously marked when the print was dry, as aforesaid. The trimmed print is then lifted from the glass plate with a clean palette knife, taking care not to touch the pigment, which now comes to the very edge of the paper; it is placed, face upwards, of course, on a sheet of thick blotting paper; the dry transfer paper is placed upon it and gently pressed down to insure a perfect contact all over. The whole packet is then reversed, so that the blotting paper comes uppermost, and placed on a piece of smooth card, or better still, on a wooden drawing-board, the surface of which must be perfectly even. The blotting paper is now removed, and replaced by a sheet of strong tracing paper, that should be transparent enough to let the pencil outline of the image, drawn on the back of the print, appear clearly through it. On the top edge of the tracing paper, but at some distance from the pigmented bromide, is placed a heavy weight of some sort, such as a large book, to prevent any possible slipping of one paper on the other.

We have now come to the stage of the controlled transfer operation. Any tool without sharp edges would do for the purpose, but the best, in my opinion, is one of those small

boxwood "boasters," as used by sculptors for plaster modeling. These "boasters" are made in a number of different shapes, and the most suitable is the one having the shape of a slightly curved S; it costs only a few pence and can be purchased at any artist-colorman's shop.

Placing the left hand on the lower part of the tracing paper, the upper part of which is held in position by the weight placed upon it, I rub vigorously, with the "boaster" firmly gripped in the right hand, on the part of the tracing paper covering the pigmented print; this action transfers the pigment, and is freely controlled by the hand, as the pressure may be varied on the different parts of the image, the visible pencil drawing serving as a guide. The pressure must be heavier on the blacks in order to transfer the greatest possible quantity of pigment. I say the greatest quantity, because it is not possible to get the whole of the ink to leave the gelatine in the blacks. On the contrary, the halftones and light tints are transferred integrally without great pressure. Various effects may be obtained by this method; sketchy backgrounds are easily produced on portrait pictures, for instance. A "boaster" with a saw-like edge works wonders to produce pastel-like hatchings. One may even omit to transfer certain parts of the image, with a view to a greater concentration of interest on the strong points of the composition.

The transfer operation may be followed and eventually corrected at any moment by lifting up one corner of the tracing and bromide papers, holding down the opposite side of the latter to keep it in perfect register.

When the transfer is found satisfactory, the bromide and transfer papers are separated, and as the latter dries almost instantly, the necessary spotting and minute retouching can be done at once by means of water colors or crayons.

Another advantage of this method over the roller-press system is that it eliminates the danger of the gelatine sticking to the transfer paper and injuring its delicate surface when the separation is effected. Sticking, in fact, occurs usually in the white or unpigmented parts of the image under the strong pressure of the rollers, but by the method here described it is not necessary to apply pressure on these parts.

This article does not claim to indicate any

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definite procedure. Other workers may improve a good deal upon the means I have adopted; but I confidently recommend them for a trial, feeling sure that every amateur with an artistic and independent turn of mind will derive great pleasure in feeling that he has absolute control over a process that, with the roller-press, possessed something that escaped domination.—J. H. Coalsworth in *Amateur Photographer*.

Soaping Bromoil Prints

Now that outdoor work is being reduced to a minimum owing to the short days and the restrictions on photography by the authorities, many workers are taking up artificial light processes, of which one of the most interesting is bromoil. This is not used by many amateurs because of the difficulty they have experienced in getting prints to ink up satisfactorily. Many are disgusted because the print refuses to take the ink.

Bromoil prints, I find, may be produced with ease and certainty. I have experimented with various kinds of bromide papers and with various developers, with plain and with acid fixing baths, and find, contrary to the instructions in books, that the bromoil print is not affected by any of these if the directions which follow are carefully carried out.

First, a bromide print correctly exposed—that is, so that it will develop fully and will not over-develop if left in for a considerable time—is taken and placed in water at a temperature of seventy degrees Fahrenheit and left there for ten minutes. It is then bleached in "Williams' Bleacher" at the same temperature. The action takes place very quickly. The print is left in for two minutes, and then washed in two or three changes of water at seventy degrees Fahrenheit until all color is removed. Next it is transferred to a dish of water at seventy degrees Fahrenheit, a bar of ordinary Primrose household soap is rubbed on the hands so as to get a good lather, and this is then rubbed well onto the surface of the print while it is soaking in the water at seventy degrees Fahrenheit. A final wash is given at the same temperature, and the print may be placed on the base for pig-menting. It is surface dried, and will ink up readily, no matter what developer has been used.

This method has never failed me, provided

the original bromide has correct exposure. The whole secret of the process depends on the condition of the gelatine of the bromide print for absorbing the requisite amount of ink; and the soaping of the print seems to give just the necessary attraction to the gelatine for the ink, so that no further trouble is experienced. If the print is an old one, it is necessary to give a preliminary soaking for one hour at sixty-five degrees Fahrenheit before bleaching.

Apparently, the ready absorption of the ink is due to the small quantity of alkali contained in the soap, which leaves the gelatine with its surface in right condition to take the greasy ink. Prints so treated can be inked in a very short time.—"Experimenta" in *Photography*.

Photography of Coins

Not long ago, having to illustrate with lantern slides a short lecture on the excavations at our local Roman city, Magna Castra, I wished to include some photographs of coins dug up there.

I knew that old coins of varying color or stain in different parts do not of themselves photograph successfully, and that plaster casts are always used in professional work; but I saw an account in some foreign or American photographic paper that it was easier to make an impress of the coin on damp cardboard under pressure, in the same way as a stereotyper makes a paper mould from his type, and from that to make a plaster cast.

I have long been much interested in the fact that an incised carving appears as if it were in relief if lighted to give that illusion; that is, if photographed upside down, and the print shown right way up, and I surmised that the plaster cast from the mould could be omitted and the mould itself photographed, the result appearing exactly as the raised coin.

This surmise proved to be correct. I should remark that there is not the slightest advantage in "tinting" a cast or mould to be photographed. The negative need not be dense, and as coins are shown without a background, the negative can be printed to any desired depth.

The coins must be washed with soap and a nail brush, and very hot water, and very slightly greased with vaseline. Best thick

"ivory visiting cards" are soaked in water over night. Two pieces of thick felt are cut a little larger than the cards, and on a piece of felt a wet card is laid. Two or more coins are put on this, then another wet card on them, and then a piece of felt again. The whole is placed in a screw letter-copying press or between two pieces of board in a vise and pressure gradually applied. They are left under the heavy pressure for ten minutes or so. The moulds can then be taken apart and pinned to a board to dry. When dry, the cards can be cut, the obverse and reverse of each coin brought together, cemented on another card, and a negative taken. The moulds should be upside down, and lighted from the side. When the negative is dry, all except the coin must be blocked out with opaque black. Prints or lantern slides can then be taken.

I made one curious discovery in doing this work. It is that the eye is so accustomed to seeing a coin with raised letters and head, that it absolutely refuses to see a photograph of a mould of it as a hollow, however it is lighted.

A still shorter cut can be taken if desired, and I found it successful. A lantern plate can be put in the camera and the mould photographed direct on it without intervention of a negative. In this case it ought to show us a raised coin, and should be taken right way up. I prefer, however, to take a negative and print from it.—Alfred Watkins in *Photography*.

Uneven Illumination

One of the difficulties about using very wide angle lenses is that the lighting falls off very greatly towards the edges of the plate, and various devices have been introduced at different times to remedy this. In Sutton's panoramic water lens a "butterfly stop" was used, an arrangement by which the opening in the lens looked as large when viewed at an angle as it did when seen directly. In the Goerz Hypergon a star-shaped disc was pivoted so that it could be rotated during exposure, cutting off the central rays while allowing the marginal ones to act. Dr. Miethe suggested the use of a plano-convex lens of obscured glass cemented to a plano-concave one of plain glass, the result being like a piece of plain flat glass, but more opaque in the center than at the edges. A simple arrangement within reach of any one

who has much use for a very wide angle lens is to turn the camera towards an even white surface, such as a sheet of card, and expose a plate with the lens. On development it will be much thinner at the edges than at the center in consequence of the uneven illumination. A transparency made by contact from this will be denser at the edges than at the center. Two or three of different degrees of density may be made from the same negative. Such a transparency put into the printing frame before inserting the negative that is to be printed will serve to counteract its thin edges. If the original negative is fully exposed, so that its edges are only thin, not under-exposed, this will prove a complete cure.—*Photography*.

The Inventor of Kinematography

In the issue of our contemporary, the *Bioscope*, dated December thirtieth, is included a special eight-page supplement devoted to the early history and invention of kinematography. The article and quotations are authoritative and conclusive, and demonstrate the claims of Mr. W. Friese-Green as the sole inventor of motion-picture photography as we know it today. As the editor of our contemporary points out, had Friese-Green taken the same trouble in the renewal of his patents, the specifications of which are reproduced in the article, as he did with the scientific side of the business, he would today be drawing very large sums indeed from the thousands using these patents. As it is, the inventor sees around him a vast industry, the sequel to his genius, but having spent his all for the good of others, is now in a position of actual want and has a wife and two boys entirely dependent upon him. In view of the pleasure and entertainment that are given to millions every day as a result of Friese-Green's researches, both the public and the kinematograph trade should see to it that matters are put right. A Friese-Green fund has, therefore, been opened at the L. and S. W. Bank, Frith Street Branch, and contributions can be sent to the editor of the *Bioscope*, 85 Shaftesbury Avenue, London, W. Our readers should also ask for a copy of the issue referred to above. It makes interesting and instructive reading.—*Amateur Photography*.

NOTE: Seeing what the "movies" are to America, this should concern us also. [H. D'A. P.]

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Those Silvery-Grey Bromides

One method of producing very pleasing effects along this line hinges on the slow development of the enlargement by alternating a regular developing solution that has been diluted, and a soaking in plain water. It takes time but for certain subject the results are well worth the trouble. The developer should be diluted to one-half or less the strength at which it is ordinarily employed, and bromide added in proportion to the total bulk. Another tray should contain water only. After exposing the print, soak in the latter for about ten seconds, then transfer to the dilute developer for a like period, removed and drained a little and then into the water again, alternating the two until the development is completed. Modifications of the method suggest themselves as one gains a little proficiency and confidence. By having at hand a little full strength developer and a swab of cotton one can build up some parts in advance of others, and in that way give emphasis that is lacking in the straight print. One example of such work that came to our attention was a landscape that apparently was treated in broad masses quite charming for that particular subject, while the negative was such that a straight enlargement was most distracting on account of the abundance of fine detail scattered all over the print.

Making Color Filters

A New York correspondent asks as to the relative value of gelatine and collodion as a medium for carrying the dye, he wishing to coat glass with a vehicle containing the color. We can hardly do better than to quote from a little booklet by Professor Wallace, now with the Cramer Laboratories, some fifteen years ago. He said in a note at the end: Since writing the above the author has been led to the conclusion that although the collodion methods serve very well for the manufacture of light filters

which are not required to retain their permanency through a number of years, yet the use of gelatine as a coating upon the glass is much to be preferred, as offering results which are to the best of his observations strictly permanent. After the lapse of a few years the collodion film is apt to show irregular opalescence, like ground glass, which interferes greatly with its working; in fact, it will, as it increases, render the screen entirely useless. Under his continued observation for a period of about eight or ten years, this defect has not shown itself with gelatine, therefore, the remedy is obvious.

Developing Enlargements

A very successful professional enlarger, talking about his method of working, laid it down as his settled conviction that correct exposure was the main thing. Trying to force up, by longer development, an under exposed print was sure to result in harshness, while curtailing development in order to avoid too dark a print from an over-exposed sheet of paper simply gave a flat result. Occasionally one could make use of these facts to secure more contrast from a flat negative or more softness from a negative inclined to be hard, but with average negatives it was most important that correct exposure be given. Furthermore, when it comes to sepia toning, only the correctly exposed print responds fully to the treatment given. He agrees with Alfred Watkins in the matter of factorial developing which he employs in his work. He says that the factor once found for the particular developer used does not change with different grades or brands of paper. The factor for his own developer is four, which is, as in the case of nearly all, about one-third the factor of the same developer when used for plates. His practice is to throw his weight on to his right foot and start to count as the developer is flowed over the paper. At the first appearance of the image his weight

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is shifted to the left foot and a new series of counts is started, changing the weight and starting a new series of counts twice thereafter, pouring off the developer as the fourth series is completed with his weight on the left foot for the second time. Of course, the number counted between the pouring on of the developer and the first appearance of the image establishes the number of counts for each of the three following series. As his exposures are nearly all correct, his "first appearance" time is always about the same number of counts, and, therefore, the difficulty judging when development is complete becomes simply a matter of counting off the time required for the "first appearance," and then repeating three times.

Stains Caused In Drying

A correspondent in Oregon wants to know how these can be removed. The truth of the matter is, we doubt very much if they can be effaced and have so stated before. However, he might try a formula recently published in one of the English journals. This consists of thoroughly bleaching the negative in a solution made up as follows:

Bichromate of potassium....	45 grains
Sulphuric acid	1 drachm
Carbonate of sodium.....	240 grains
Water	5 ounces

The negative should be thoroughly bleached in this solution, thoroughly washed and then redeveloped in any clean-working developer. Perhaps, the writer suggests, the developer originally used is the best to employ. For the benefit of other readers, we might explain that these stains or markings are really neither of these things, but a more or less different degree of density with a more or less clear line of demarkation showing where the drying of the negative was accelerated or slowed up during the process. The same form of stains is produced by spilling water on a negative and then allowing it to dry without wetting the entire surface to an equal extent.

Introducing a Novelty

There is a photographer in your town no doubt, but in a certain other town there is a plain amateur who believes in producing something his fellow townsmen want without waiting for the Eastman Company to suggest to them that they pay him a visit. Seeing a quilt made up of those "Flags of All Nations," that are given away with some

cigarettes, he conceived the idea of furnishing a series of landscapes and local views, printed on cloth by the simple blue print process, for a given price. The first two or three sets were given away where he thought they would be made up into something attractive and the finished article shown, and the desire of the average feminine worker to show something pleasing when her own production did the rest. So great has become the demand that our friend is thinking seriously of putting in some sort of a machine that will sensitize the cloth and print it directly from a roll. One of his lady customers has purchased over a dozen sets, making up charming blue and gold bed covers to be sent to friends who have moved away from the town and who will be delighted with the suggestions of their former home.

Handling Over-Exposure

A recent visitor complained that, trying to counteract the effect of accidental over-exposure in developing a series of negatives, the plates seemed to work differently, not as they did a number of years ago. Enquiring into the matter, we found that this worker had, a few years ago, had uniform success in handling over-exposed plates by the simple expedient of adding a generous amount of bromide to his hydroquinone developer. Just recently, the same procedure with a metol-pyro developer seemed to fail entirely. The whole trouble was due to the fact that bromide as a restrainer has value only when used with a low factor developer, one in which the high lights come out first and well in advance of the rest of the tones making up the image. Even with such a developer, if development is continued beyond the time for a correctly exposed plate, the bromide added will have no advantage, as the final tones to come up will find time to make their appearance, and while the negative will be more dense in range of tones, its flatness will be just the same as if developed for a shorter time in a solution containing no bromide. With a high factor developer, metol, weak pyro, or a combination of the two, the high lights and middle tones come up in such rapid succession that before sufficient density is secured in the first, detail in the other parts grows to such an extent that the characteristic flatness of over-exposure results.

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- 4173—Eugene B. Lane, 285 School St., Berlin, N. H.
Class 2.
- 4174—Aug. Gaarz, 301 Arbor Vitae St., Cleburne, Texas.
5x7 and smaller, developing papers, of general views and copies of paintings; for most anything; prefer nude and semi-nude figure studies. Class 1.
- 4175—John C. Stuessi, Jr., General Delivery, South Milwaukee, Wis.
I would like to hear from every member of the I. P. A., especially those interested in genre, birds, animals and marines, or, in fact, any good picture that has a story to tell. Everybody write. Class 1.
- 4176—Mrs. Office McDonald, R. F. D., Green Ridge, Mo.
Class 2.
- 4177—Marvin Roark, Ellensburg, Wash.
15x2½ to 11x14, developing papers, of waterfalls, mountain scenery, portraits, and snow scenes; for mountains, waterfalls, and natural scenery. Class 1.
- 4178—Dr. J. A. Dodson, Maysville, Ky.
3¼x5½, developing paper, of outdoor and river scenes; for miscellaneous views of general interest. Class 1.
- 4179—I. S. Halpern, 765 Jennings St., Bronx, New York.
V. P. Kodak, 2½x4¼, 3¼x5½, 4x5 and 5x7, various kinds, of landscapes, monuments and architectural New York views; for landscapes with clouds, and architectural. Class 1.
- 4180—Chas. Rozell, Orange, Cal.
Any size, developing paper, of portraits; for the same. Class 1.
- 4181—Charles Weems, 102 Garfield Ave., Valparaiso, Ind.
3¼x4¼, developing papers, of botanical views; for the same. Desire only lantern slides or prints of botanical nature. Class 1.
- 4182—Wm. R. Bowlin, 10054 Wood St., Chicago, Ill.
5x7 and 6½x8½, of commerce, art and history of Chicago, also agricultural and nature studies; for historical subjects, also commerce and industries of world. Lantern slides only. Class 1.
- 4183—H. J. Nason, 3021 North 8th St., Tacoma, Wash.
Class 2.
- 4184—E. F. Loomis, Anderson, Cal.
Class 3.

RENEWALS

- 777—Herbert R. Gregg, Oroville, Wash.
Class 2.
- 2009X—Charles F. Meacham, Bellows Falls, Vt.
Post cards only. Class 1.
- 2025X—V. A. Wood, Oakdene Ave., R. F. D., Hackensack, N. J.
4x5 or enlargements, developing papers, of scenic and genre; for all subjects, barring buildings or street scenes of no particular or general interest. Desire to exchange lantern slides, prints or post cards of genre subjects, especially children. Class 1.
- 2776X—L. A. Sneary, 2822 Espy Ave., Pittsburgh, Pa.

- Lantern slides of historical points in and about Pittsburg, Pa., nature studies, flowers, etc.; for whatever can be agreed upon after correspondence. Class 1.
- 2885—George Macaulay, 167 Allen St., New Bedford, Mass.
3¼x4¼, developing paper or post cards, of marines and miscellaneous views, also a few speed views; for views of interest, especially mountain views. Good work only. Class 1.
- 3184—J. Fred Fehr, 149 Brainerd St., Naperville, Ill.
Lantern slides. Class 1.
- 3349—L. O. Surles, P. O. Box 434, Cuthbert, Ga. Formerly at 231 East Pine St., Atlanta, Ga.
3¼x5½ and 4x5, various papers, of Southern dark and characteristic pictures, also pretty wooded and stream landscapes; for anything of general interest. Class 1.
- 3830—Dr. Addison O'Neill, Daytona, Fla.
Class 1.
- 3848—William Charles, Box 33, Basom, N. Y.
2¼x3¼ to 5x7 and post cards, developing papers, of views, portraits, and flashlights in the mines; for athletic, swimming and camping views. Class 1.
- 3852—J. W. Jeffers, M'Clure Bldg., Frankfort, Ky.
Vest pocket, 3¼x5½, 4x5 and 5x7, developing papers, of general views, landscapes, historical places in New York, Lookout Mountain, Cuba, also local and a few nudes; for foreign and anything that is good; only good work accepted; post cards and prints with white borders. Class 1.
- 3942—A. Warrington, 124 Dock St., Philadelphia, Pa.
2¼x3¼ and 3¼x5½, developing papers, of waterfalls, landscapes, historical, marine and genre; for the same. Class 1.
- 4001—Fred Weidmann, 1692 2nd Ave., New York, N. Y.
3¼x5½ and 4x5, developing papers, of interesting scenes in and around New York; for same class subjects. Only first-class work sent out and wanted in return. Photo correspondence wanted with each exchange; cards or prints. Class 1.
- 4022—V. E. Fowler, P. O. Box 919, Portsmouth, Ohio.
4x6, developing paper, of figure studies, draped and nude; for the same. Class 1.
- 4036—Hubert R. Wall, Box 171, Sonora, Tuolumne County, Cal.
3¼x5½ and 5x7, various papers, of local views, mountain scenery, rivers, lakes, Yosemite Valley views, home portraits, and views of general interest, also post cards; for views of the following: Montreal, P. Q.; St. John, N. B.; Quebec, P. Q.; Toronto, Ont.; Niagara Falls, Ont. and N. Y.; Buffalo, N. Y.; Detroit, Mich.; Chicago, Ill.; Los Angeles, Cal.; Pasadena, Cal.; Long Beach, Cal.; San Francisco, Cal.; also 3¼x5½ views of San Francisco Fair, and life studies in the nude. Class 1.
- 4038—J. R. Ainsworth, Salem, S. D.
Lantern slides, of interesting views; for the same. Class 1.
- 4043—Carl H. Helmbrecht, R. F. D. No. 2, Box 70, Turtle Lake, N. D.
Class 2.
- 4049—Robert S. Blatchford, Reserve, N. M.
Class 2.
- 4104X—George Plass, R. F. D. No. 7, care Chas. Bloebaum, Vincennes, Ind.
Post cards. Class 2.

CLUB NEWS AND NOTES

Club Secretaries and others will oblige by
sending us reports for this Department

The Camera Club of New York City

The Camera Club of New York City is having a very active and successful season. Every Tuesday evening, which is the regular club night, entertainments have been given. In addition to photographic and musical offerings, the Club has had lectures by the following eminent artists: Henry W. Ranger, Elliot Dangerfield, J. William Fosdick and George Bogart. Exhibitions have been going on every month, and up to the present time our list includes the honored names of Pirie MacDonald, Dudley Hoyt, Henry Wall, and pictures by our fellow member, Mr. Edward Steichen. Later in the season we are to have Interchange Exhibits, and we also have advertised a competition for gold prizes of "Regular" and "Fake" pictures, which is only open for our members. Photographers, either professional or amateurs, visiting New York City, will be most cordially welcomed at the Camera Club.

The Montreal Exhibition

The Montreal Amateur Athletic Association Camera Club of Montreal, Quebec, announces its Tenth Annual Exhibition, to be held April tenth to fifteenth, inclusive. The Exhibition will be divided into five classes: figure studies, landscapes, watercolors, and genre, open to all amateurs, and a special class open only to members of the Association. Bronze medals will be awarded in the first four and a bronze plaque in the latter class. No fee is charged for entries, and while pictures must be mounted, framing is optional. Each picture must bear on the back its title, the exhibitor's name and address and club, if any, to which he belongs. Exhibits must be delivered, carriage paid, to E. W. de Cordova, Secretary, 250 Peel Street, Montreal, on or before the twentieth of March. Exhibits from outside of Canada should be sent by post, thus avoiding customs formality in receiving and returning. A letter advising of the sending, the number of pictures, their

titles and classes, should be mailed under separate cover to the Secretary; and, although not demanded, entry forms for this purpose will be supplied upon request.

The Guild of Allied Arts

At the annual meeting of the Guild of Allied Arts and Crafts in Buffalo, New York, there was held an exhibition of lithographs and woodcuts that attracted a great deal of attention from the artists and art-loving residents of that city. The Guild has under consideration the purchase of a suitable site on which to erect a five hundred thousand dollar structure, to be used as headquarters together with suitable rooms for the Drama League, the Chromatic Club, the Artists' Society, Society of Architects, and other kindred organizations. No doubt the local camera organizations will be represented, as photography will have a prominent part in the Guild.

During the session the annual election was held, resulting in the election of, among others, Spencer Kellogg, Jr., as Second Vice-President, and W. H. Porterfield as Treasurer.

It hardly need be mentioned that both are quite prominent in the local as well as national photographic circles; in fact, both gentlemen are no doubt well known to a large proportion of our readers who will appreciate the honor conferred. Mr. Kellogg is taking a most active part in the carrying out of the plan of a suitable home for the Guild, and he has secured the co-operation of a number of wealthy Buffalo citizens therein.

Illinois College of Photography

While fighting a fire at his home a few weeks ago, Professor C. W. Fisher, of the College of Photoengraving, received some very severe burns. These resulted from an explosion caused by the accumulation of gas in one of the rooms. He was taken to the hospital and remained there for over a week.



OUR BOOK SHELVES

"Photograms of the Year 1916"

This, the twenty-first yearly issue of this handsome annual, which has just reached our desk, sustains its reputation by the large number of handsome reproductions that it contains. There are about one hundred of these illustrations, nearly all of them the full size of the large pages, and all are printed in handsome style on a cream-tinted paper that adds greatly to their photographic quality, not to mention a number that are "tipped" in on regular mounting paper in photographic style. Not a few of our American workers are represented, and added interest is given the volume by a discussion of the merits of a large number of the pictures shown.

This annual is so well known that no great amount of description is necessary. It is published by Hazell, Watson & Viney, Limited, 52 Long Acre, London, W. C., England. The price is two shillings sixpence net, and is obtainable from all book stores, news agents and photographic dealers throughout the world. Both Tennant & Ward, 103 Park Avenue, New York City, and Hirsch & Kaiser, 218 Post Street, San Francisco, can supply copies at one dollar and twenty-five cents, postpaid.

"British Journal Almanac—1916"

This ever-welcome photographic compendium is again at hand, just a little late, but all the more appreciated as it does reach our desk. It is published by Henry Greenwood & Company, Limited, 24 Wellington Street, Strand, London, and obtainable in this country through the trade agents, George Murphy, Incorporated, 59 East Ninth Street, New York. Practically every dealer carries a supply, and the well-known local firm of Hirsch & Kaiser, 218 Post Street, stock a large number each year. The paper covered edition costs fifty cents, the cloth covered edition, one dollar, postage extra. As both weigh, wrapped, about three pounds, the cost of postage according to zone can

be calculated by the one ordering from either of the two firms mentioned.

An "All-Australian" Number

The January issue of *The Australasian Photo-Review*, the second yearly "All-Australasian" number, is a monument to both the skill and ability of the photographic workers and the enthusiasm and enterprise of the publishers in this progressive country across the water. The issue contains eight full-page illustrations in pleasing tints, and about five times as many regular illustrations. The articles, particularly interesting, cover a wide field, Portraiture in Direct Sunlight, Tank Development for Plates and Films, Some Notes on Composition for Photographers, Home-Made Accessories, Photographic Book Plates, and like titles giving some idea of the scope. These articles, like the picture, are all the work of Australasia contributors who should be extremely flattered at the result the publishers of the magazine has achieved in producing this particular issue. The magazine is edited by the well-known Walter Burke, F. R. P. S., and published by Kodak (Australasia) Limited, 379 George Street, Sydney, Australia.

"How To Make Prints In Colors"

This is No. 4 of the Practical Photographic Series so well and favorably known. Its sixty-six pages are devoted to many different methods of making prints in colors, beginning with the ordinary blueprint and following with the method used for obtaining sepia and other colors on home-made papers as well as those in general use, through carbon printing, autochrome and ending with the new Hesslves and the Kunz processes. The books are obtainable in paper and handsome cloth covers at the nominal price of twenty-five and fifty cents, respectively. Published by the American Photographic Publishing Company, Boston, Massachusetts.

NOTES AND COMMENT

**A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest**

Reported by William Wolff

News of the death of Mr. Saul, who was formerly on the Coast for the Eastman Kodak Company, came as a shock to us all.

Ernest Forsmark, of Turlock, spent a few days in San Francisco recently.

L. M. Powell, of Hanford, was in Kansas City on business during January.

Cousins & Howland, of Hanford, now carry the Kodak line.

His friends would like to know what Otto Ayers, with Buker Colson, Fresno, likes better than the drug business.

A. L. Sunderland, of Webster Brothers, Fresno, was recently elected secretary of the Peach Association.

The genial Bertrand, of the Cramer Dry Plate Company, is in San Francisco at the present time.

H. P. Graflex Willis has returned from his southern trip.

Now that the rain has ceased, we should all get busy.

Photographers' Association of America

The meeting of the Executive Committee of the Association was held at Hotel Statler, Cleveland, Ohio, January tenth to thirteenth, inclusive. Taking up the plans for the 1916 convention, July twenty-fourth to twenty-ninth, inclusive, were decided to be the most suitable dates, and Wigmore's Coliseum, with a total floor space of approximately sixty-five thousand square feet, was selected for the meetings and exhibits of the convention. The Hotel Statler was selected as headquarters.

The keynote of the convention will be "business-getting and business-holding ideas," and around this the entire program is planned. The art side of photography will not be neglected, however, for competent lecturers and demonstrators will give their best efforts towards instructing those who desire to become proficient in artistic photography. Some of the demonstrations

will cover pictorial photography, and others will be by photographers who have made a success of the business of producing what is commonly known as "bread and butter" photographs and all members will be privileged to ask questions and make suggestions.

A special effort will be made this year to make the picture exhibit unusually instructive. Up to twenty pictures will be selected for salon honors. All the exhibitors who receive salon honors will be given a certificate of merit as last year. The pictures will be divided into four classes: Interpretative, general portraiture, commercial photographs and the complimentary. The commercial photographers will be represented on the program by at least two numbers, and their pictures will be hung separately, and at least one number of the program will be devoted to the women of the Federation. Unusual entertainment features will be possible this year; a trip to Cedar Point for one day will be one of the biggest hits of the convention. Another feature will be an informal reception and dance in the large ball room of the Statler Hotel on Monday evening, and other social features will keep the week full of pleasure.

The Stevens-Ayres Bill

On January twenty-first, under the title, "To protect the public against dishonest advertising and false pretenses in merchandising," Representative Dan V. Stephens, of Nebraska, today reintroduced in the House of Representatives the original Stevens-Ayres bill with a number of important amendments designed to meet the views of many friends of the measure. The new bill specifically permits discounts for cash and for quantity and for allowances and rates covering costs of transportation, and a final, new paragraph exempts sales to libraries and other public institutions. There are also drastic provisions against the use of the privileges of the bill in connection with any monopolized

NOTES AND COMMENT

product or one concerning which there is any combination between manufacturers.

The latest tally shows two hundred and nine members—nine less than a majority—of the House, in favor of this legislation.

Examples of Correct Exposure

We have recently had the pleasure of inspecting some very fine bromide enlargements from negatives covering a wide variety of subjects, all the original exposures being timed with the new Harvey Exposure Meter. Architectural subjects, groups in the shade, aeroplanes, twilight effects and night views of city streets were included in the collection. The enlargements showed conclusively that the negatives from which they were made were of the highest quality, despite the fact that they were developed by an amateur, the enlargements, however, being the production of a professional, turned out in the regular course of such work through his shop. We have mentioned this for the reason that many amateurs find it not difficult to produce good contact prints from their small negatives by taking advantage of the various grades of paper obtainable, but when the same negatives, some thin and ghostly and others dense and hard, are sent to an enlarging house, or even when they try to enlarge from them themselves, the results are disappointing. Proper timing of the original exposures assures good negatives, and good negatives assure good enlargements. Readers appreciating this rather obvious fact and feeling the need of a reliable exposure guide should investigate the merits of the meter offered by G. L. Harvey, 105 South Dearborn Street, Chicago, by sending for descriptive circular or sending the dollar that the meter costs.

A Substitute For Metol Promised

Doctor Charles J. Thatcher, a graduate of the University of Leipsic, but now a chemical expert in New York, has made an extensive study of the composition and properties of various photographic developers, with the result that a patent has been taken out on a new developer called Kathol. This is claimed to have substantially the same composition as metol, and to answer perfectly as a substitute therefor. It is believed that it can be successfully manufactured on a commercial basis, and if this and the claims made for the new developer prove to be true, the product will certainly be made most welcome

by the photographers of the country who are now deploring the serious shortage of metol, due to the disturbance abroad.

The Hylo Mazda Lamps

The new dark-room lamp known as the Safe Ruby Bulb Hylo Mazda is achieving great popularity with both amateur and professional photographers. It embodies all the advantages of the well-known Mazda, while giving the user two lamps in one, as the larger or full filament can be used for bromide papers, ordinary plates and lantern slides, while the lower candlepower filament is suitable for the safe handling of the more sensitive plates and films. These lamps differ from the ordinary ruby lamps in being not only without a tip, but the color of the bulb is such that the lamps have the non-actinic quality of the best ruby glass manufactured especially for photographic purposes.

The well-known local firm of Hirsch & Kaiser, 218 Post Street, San Francisco, in addition to supplying their retail customers, have been appointed Pacific Coast agents, and will supply the trade in this territory.

Some Camera Bargains

In our advertising section this month will be found an announcement of the well-known Carmichael's Camera and Lens Exchange of 111 Summer Street, Boston, and those interested in high grade, second-hand outfits should give it their attention. "Carmichael's" is well and favorably known to all photographers in Boston and the surrounding country as the home of rapidly moving bargains, and this enviable reputation makes for most satisfactory dealings both for the man with a desirable lens or outfit to exchange or the individual who wishes to purchase a satisfactory equipment at a bargain price.

For Professional Enlarging

The new Ansco Enlarging Outfit is the result of the interest shown in the outfit installed at the last National Convention for the purpose of demonstrating enlarging Cyko. The interest shown was conclusive that an equipment along the same lines would meet with approval, and we are glad to announce that this equipment is now available through regular trade channels.

Briefly, it consists of an 8x10 enlarging camera having an extension base equipped with an easel or copying board, the whole resting on a supporting table occupying a

CAMERA CRAFT

floor space of thirty-one by fifty-seven inches. The adjustment of negative, lens and easel is achieved by a most simple and efficient cable control that enables the worker to make adjustment easily and quickly without shifting his position from the side of the outfit. The new and efficient M-shaped Cooper Hewitt tube is employed with this outfit, the quality of the light being such that roundness and atmosphere are brought out, while any coarseness or retouching is not accentuated. Space does not permit of a full cataloguing of the many advantages of this enlarging outfit, but a circular giving particulars can be obtained from the Ansco Company, its various branches, or dealers carrying its line.

Southern School of Photography

A recent letter from "Daddy" Lively, of the Southern School of Photography at McMinnville, Tennessee, advises that the school for this year opened with a nice class, and indications point to an exceptionally good attendance to follow. Those desirous of acquiring new ideas and new methods, to the end that they can produce better photographs and make more money, should write the school for catalogue and information concerning the rapid method of instruction being followed.

American Bromine and Bromides

From *Commercial Reports* we learn that the bromine wells in and about Pomeroy, Ohio and Mason City, West Virginia have again been put into commission after remaining in a state of idleness for a number of years. The present monthly production will amount to five or six tons, enough to notably lessen the present shortage and permit American manufacturers of photographic chemicals to furnish all needed of the forms of bromide used in photography: The American output of bromide has largely been concentrated in Michigan and Pennsylvania, in connection with the salt industry, the maximum output being reached some ten years ago. The average output at that time was about six hundred tons, since which it has fallen to something less than half that amount.

The Ernemann Kino Apparatus

The Meyer Camera and Instrument Company, Incorporated, 31-33 East Twenty-seventh Street, New York City, advise that they have on hand a number of the Ernemann Kino motion picture cameras that they

will be glad to dispose of at a very much reduced price. These excellent instruments are equipped with developing frame, film cementing block, film-reel holder, film-winding apparatus and f-3.5 anastigmat lenses. These cameras are of the usual Ernemann high quality and are used quite extensively abroad for scientific cinematographic lectures in universities and the like. The negatives are somewhat smaller than those made on standard moving picture film, as the film used is narrower and accommodates twenty-eight pictures to the foot. This film the Meyer Company can supply at four cents per foot. Any one interested in this type of motion picture camera and projecting outfit should communicate with the firm mentioned.

Illinois College of Photography

The College basketball team journeyed to St. Elmo, Illinois, last month, and in a game with one of the teams of that city, won by a score of twenty to seventeen.

Walter P. Gould, a 1915 graduate of the College of Photography, is now employed in the Reeves Studio at Anderson, Indiana, one of the best in the country. The owner, Mr. Reeves, is an ex-president of the Photographers' Association of America.

The Second Annual School of Professional Photography, the third week in January at the College, was conducted by expert demonstrators from the Ansco and Hammer Companies. Some demonstrations given with a Cooper Hewitt enlarging lamp were very interesting and instructive.

Professor C. W. Dishinger, of the Printing and "Fishing" Department, spent the holidays in Mobile, Alabama, where he enjoyed himself with his favorite pastimes, hunting and fishing. While himself and party were cruising along the coast, the boat encountered a gale which almost caused it to "turn turtle." Though somewhat frightened at the time, the professor realizes that it is all a part of the game.

On February third, President Woodrow Wilson and party passed through Effingham on the Pennsylvania Railroad on the return from his Middle Western trip, en route to Washington, D. C. He would make no speech, but came out on the platform of the car and smiled upon the thousands who were at the station. A battery of cameras and motion picture machines was in evidence, and a great many snapshots were taken.

CAMERA WANTS

Advertisements of the above nature shown below will be inserted under this heading at the rate of fifty cents each insertion, for twenty-five words or less; each additional word, two cents extra, cash with order. Those of positions wanted inserted free. No business advertisements accepted.

FOR SALE Ground floor studio located at Oxnard, Cal., in a rich farming valley with a population of 3,500 to 4,000; 6 other towns to draw from. Doing a good business; reason for selling, going East. For further particulars address W. E. Detrick, Oxnard, Cal.

PHOTO SUPPLY Business in San Francisco for sale. Has Eastman Kodak agency. Long lease and low rent. Will sell half interest or entire business. Address, Box 40, care "Camera Craft," San Francisco, Cal.

FOR SALE 3B Dallmeyer No. 2 1B Goerz 4x5 Slaytex with 24 holders and New York camera and stand. Bert Hodson, 811 K St., Sacramento, Cal.

10x12 GUNDLACH Rectigraph lens, newly fitted with Iris diaphragm; list, \$60.00; will sell for \$25.00. N. C. H., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By experienced air-brush worker, colorist, spotter and retoucher. Permanent position desired, but will take piece work. M. E. R., care "Camera Craft," San Francisco, Cal.

WANTED TO TRADE A1 Vista 12-inch Panoram camera for flash apparatus. What have you? Hodson, 811 K St., Sacramento, Cal.

POSITION WANTED On coast, by receptionist and good retoucher; can operate and assist in any studio work. Address L. B., care "Camera Craft," San Francisco, Cal.

POSITION WANTED By high-class operator and retoucher of undoubted ability. Thoroughly conversant with every class of modern lighting and posing. Specialist in artificial light. Just concluded engagement with leading San Francisco firm. For particulars or interview, address A. A., care "Camera Craft," San Francisco, Cal.

PORTABLE PHOTO Outfit, new photo tent 12x22, high-grade 6½x8½ view and portrait camera, 5x7 tintype and photo camera and material. Outfit cost \$145.00, will sell for \$60.00 or trade it at its cost price. Make offers. Address Casey & Michael, Harrisonville, Ohio.

SALE OR EXCHANGE Rodenstock No. 4 f-4.5 anastigmat lens, Fountain air brush, Parallax lamp, and other photo goods and lenses. Want 4x5 anastigmat f-4.5 lens in speed shutter. Jewett's Studio, Nashua, Iowa.

FOR SALE 4x5 Century Grand camera, perfect condition, 2 holders, film pack adapter; cost \$42.50, sell for \$22.00, or what offers. Wanted 1A Kodak anastigmat. Thos. Bradt, 503 High Ave., S. W., Canton, Ohio.

ICA HALLOH Model B, 3¼x4½, Zeiss Tessar 6.3, Compound shutter, cost \$62.00, like new. Will trade for Icarette 2¼x2½ with 6.3 or 4.5 lens or sell for \$40.00. Also 6 plate holders for Ica Tromma model 3¼x4½, cheap. H. G. De Vaux, P. O. Clerks' Box, Canton, Ohio.

POSITION WANTED As operator, retoucher, all-round assistant, expert in home portraiture, experienced in first-class galleries. West or Middle West preferred. Address O. E. Paulson, Overton, Neb.

FOR SALE 5x7 Century view camera, Turner Reich anastigmat lens, 3-focus combination, 7½-inch, 12-inch and 18-inch focus. See H. B. Chaffer, City Hall, San Francisco, Cal.

WANTED TO RENT Studio without equipment, town of 1,000 or 2,000 population; Michigan or Northern Wisconsin preferred. Edmund Russell, Rogersville, Pa.

POSITION WANTED As all-round photographer, retoucher, color artist. Could manage branch studio. Address T. Scott, 800 Edgeware Road, Los Angeles, Cal.

POSITION WANTED You require efficiency, reliability, honesty; I want a photographic position in the West, Kodak department, dark-room, studio. Correspondence solicited. Address W. I. V., care "Camera Craft," San Francisco, Cal.

FOR SALE Goerz Tenax, 1¼x2 5-16, good condition, with 12 plate holders, leather cases, film pack adapter, 2 auxiliary lenses \$65.00. 1 No. 3 Balopticon 110-volt arc lamp and rheostat \$25.00. A. Walter Koehler, Bingham Canyon, Utah.

SALE OR EXCHANGE 3¼x4¼ Conley film camera f-6.3, Conley anastigmat compound shutter, for best offer. Want 4x5 Reflex. Wm. Wulffe, Saunemin, Ill.

FOR SALE Professional photo outfit for studio and outdoor work. 3 fine anastigmats, Portrait Una, Goerz Dagor and Goerz Series II. Also portrait view and Reflex camera with focal plane shutter. Many photo accessories. Will sell cheap. Address John B. Batson, Lamedeer, Mont.

BECK LENS 33-inch R. & J. Beck highest grade rectilinear lens, Iris diaphragm. Cost \$300.00 new, will sell for \$100.00, no trade considered. Julius G. Adler, 1409 W. Monroe St., Chicago, Ill.

FOR SALE No. 3 Vitax Portrait lens together or separately. Hetherington window accessory. Cooper Hewitt light, three tubes, two rectifiers. Richard H. Smith, Missoula, Mont.

BUSINESS FOR SALE Kodak finishing and post cards, with Ansco agency. Runs over \$200.00 per month at height of season with good profit. Good light for sittings and necessary outfit. Rent only \$5.00 per month. Must go on fruit ranch for health. \$250.00 takes business, stock and equipment, the latter alone worth \$150.00. Address J. H. S., care "Camera Craft," San Francisco, Cal.

FOR SALE Kodak, 3¼x4¼, fitted with Compound shutter and series IIB Zeiss Tessar lens No. 4. Cost \$62.50, will sell for \$38.00. Address N. C. Madison, 508 Elizabeth St., Cincinnati, Ohio. Will send to be examined.

FOR SALE 16-inch f-4, 3A Ross portrait lens, good as new; \$110.00. 16-inch f-4, 3A Bausch & Lomb; \$90.00. 9½-inch 5x8 Heliar; \$50.00. 17-inch f-7, old-style Euryscope, fine for large heads and groups; \$40.00. 14-inch f-5, 8x10 Scientific Portrait; \$35.00. 12-inch f-4, 7B Voigtlander portrait; \$70.00. 8x10 No. 1 Century camera, six extra holders, vignetter and shutter, good as new; \$60.00. C. A. Krauch, 444 South Broadway, Los Angeles, Cal.

POSITION WANTED By all-around man of 17 years' experience. Has family. Would rent furnished studio in town of not less than 1,500. Address W. J. D., care "Camera Craft," San Francisco, Cal.

SALE OR EXCHANGE For 5x7 or 6½x8½ view outfit, Victor phonograph with 14 double-faced records and silver-plated cornet. All in fine shape. W. J. Lennon, Upton, Wyo.

CAMERA WANTS—Continued.

POSITIONS WANTED By man (age 40) and wife (age 29), British, at liberty April, 1916. Both good operators and can finish throughout, including retouching and aerographing. Great at sketch work. Also first-grade commercial operating, including pan-chromatic. Specimens on application. Joint wage \$120.00 per month. Western States preferred. Address Joint, care "Camera Craft," San Francisco, Cal.

FOR SALE Make offer; 5x7 revolving back Seneca with 6½x8½ Syntor and a 14-inch single lens, sole leather case and 8 holders; cost \$85.00. 4x5 Premo No. 9, Zeiss-Kodak lens, Volute shutter, sole leather case, 6 holders; cost \$80.00. 2¼x3¼ Ideal Ica Carl Zeiss Protar lens, Compound shutter, 6 single holders, film pack adapter, ray filter and leather case; cost \$80.00. 1¾x2¼ Ica Atom, Hekla Anastigmat lens, auto shutter, 3 holders, film pack adapter and developing tank; cost \$40.00. O. W. Lillard, 1448 Van Ness Ave., San Francisco, Cal.

FOR SALE Make offer; Foss combined stereopticon and moving picture projector with Nernst light, lenses, etc.; good working order; complete in case with roll of standard film, blank slides, accessories, etc., ready to use. O. W. Lillard, 1448 Van Ness Ave., San Francisco, Cal.

FOR SALE At below prices for quick cash sales: Practically new 5x7 Century No. 2 camera with f-6.3 Zeiss lens in Compound shutter with 25 holders, duplicator, ray filter, portrait attachment, copying lens, tripod and carrying case. Cost \$150.00; \$60.00. Practically new 6½x8½ Century Senior Grand with Centor lens, Compound shutter, 4 holders, duplicator, ray filter, portrait attachment, copying lens, tripod and carrying case. Cost \$125.00; \$50.00. 8x10 B. & J. Ideal portrait lens. Cost \$60.00; \$15.00. 8x10 Voigtlander portrait lens in Wollensak studio shutter; a bargain at \$25.00. 5x7 rapid rectilinear lens in Unicorn shutter, perfect order, \$5.00. 8x10 old-style view camera with lens, but without lens board or shutter; 3 holders, tripod and carrying case; a bargain at \$7.50. 5x8 B. & J. wide-angle lens without barrel; \$3.00. 4x5 plate camera, rapid rectilinear lens, Unicorn shutter, 2 holders, old but in good order; \$5.00. \$25.00 minute button and Ferratyp plate outfit, new; \$10.00. 11 dozen post card plates; two 3x5¼ film packs; two 4x5 roll film; lot, \$3.00. 5x7 plate developing tank, new; \$1.00. \$3.00 flashlight gun, \$1.00. We want both 8x10 and 16x20 camera, perfect order, without lens, but with plate holders. Parks Mercantile Company, Parks, Coconino County, Ariz.

FOR SALE 8x10 Cooke Portrait anastigmat f-5.6, brand new, latest model. Cost \$120.00, will take \$75.00. H. W. Pfeil, 21 Main St., Champaign, Ill.

WANTED TO TRADE A Besson cornet in leather case, practically new, for a Graflex or Reflex camera or any other speed camera. Address L. L., care "Camera Craft," San Francisco, Cal.

SALE OR EXCHANGE 5x7, 1C Tessar lens, Compound shutter, for Auto Graflex Junior or similar outfit. F. Mitchell, 1845 Superior St., Toledo, Ohio.

FOR SALE Eastman No. 3 fitted with Goerz 6.8 lens and Volute shutter, or will exchange for 8-inch 4.5 Tessar lens and shutter. M. J. Rodgers, 1548 Railway Exchange, St. Louis, Mo.

WANTED HEYDE Photo actinometer, Model 2 preferred. Must be in first-class condition. Advise price. Stebbins & Stebbins, Cinematographers, Sitka, Alaska.

POSITION WANTED By young married man, all-round work man, 13 years' experience; do not use tobacco or liquor. James H. Sexton, Mesilla Park, N. M.

POSITION WANTED By young man, 9 years' experience in portrait and commercial photography. Can furnish references. Address Photographer, care "Camera Craft," San Francisco, Cal.

FOR SALE \$22.50 Vest Pocket Kodak with case \$16.50; \$35.00 Velostigmat f-6.3, 5x7, in Regno shutter, \$27.00; \$20.00 3A Kodak, T. I. B. shutter, \$12.50; Expo camera \$1.00. All in perfect working condition. The Bilger Studio, Colfax, Wash.

POSITION WANTED By experienced retoucher and finisher in first-class Iowa studio. Can accept position any time after March 1st. Address "A," care "Camera Craft," San Francisco, Cal.

POSITION WANTED By young man as general assistant. Three years' experience. Address France Gunion, Benson, Minn.

FOR EXCHANGE Have 160 acres of cut-over land in Bayfield County, Wisconsin, with house and stable; 15 acres cleared. Would exchange this for good photographic business, including buildings in town of 1,500 or more inhabitants. Land and improvements worth \$2,500. Address C. D. Vernon, care Bintliff Manufacturing Co., Minneapolis, Minn.

FOR RENT Photograph studio, practically new, in Rockford, Iowa. Good opening. Inquire of S. R. Spoffard, Forest City, Iowa.

FOR RENT Studio building in Clear Lake, Iowa. Best of location and one of the best photo towns in Iowa. Write to Foster Hays, Forest City, Iowa.

FOR SALE 4x5 Korona with Goerz Syntor lens and Sector shutter, including 3 plate holders, film pack adapter, metal tripod, trays, ruby lamp, and carrying case. Cost \$70.00, sell for \$30.00. 300 Castro St., after 7 p. m., San Francisco, Cal.

FOR SALE Good studio, outfit and lot, in a good North Dakota town. Will consider trade for studio in a good Montana town. Address G. M. Barsness, Paris, Mont.

FOR SALE Two studios in Northern Iowa towns of 1,200, without competition. Equipped to 8x10 and 11x14; electric lighted and city water. Only a few miles apart in a good farming country and live towns. We will sell the two together or separately. If you are looking for a location that will not require much money, we have it. For further particulars write Carter's Studio, Osage, Iowa.

FOR SALE Studio in town of 1,000, also branch in town of 500. Located in good prosperous community in Northwest Iowa. Studio and fixtures all up-to-date. Electric lights, water works. Rent reasonable. For particulars address E. J., care "Camera Craft," San Francisco, Cal.

FOR SALE Studio, building, business and equipment complete, in good Southern Minnesota town. Large territory, good prices, no competition. A first-class business investment. Part cash, balance on time. Address S. M., care "Camera Craft," San Francisco, Cal.

FOR SALE Well-established, well-equipped studio in fine county seat town of about 1,200 in Eastern North Dakota in the heart of one of the richest farming sections in the State. Only studio here. Must be sold before March 1st. Good reason for selling. If you have at least \$400.00 cash and mean business, write to X. L., care "Camera Craft," San Francisco, Cal.

SALE OR TRADE Only studio in a good growing town. A rich farming community. Good business, good prices. Want to change location and climate on account of catarrh. For price and information write to Box 54, Spring Valley, Wis.

G. E. BIDDELL CAMERA DOCTOR

693 MISSION STREET, Cor. THIRD
SAN FRANCISCO - CALIFORNIA

Eastman Kodak Company

ROCHESTER, N. Y., The Kodak City.

The Panoram Kodaks

The key-note of the Panoram Kodak is specialization. It has its distinct field—a field large enough to demand all that a specialized Kodak can give it and one that can be encroached upon by no other type of camera. As far as the amateur is concerned, the panoram field belongs exclusively to the Panoram Kodak. So it is that without a Panoram Kodak, no photographic equipment can be complete.

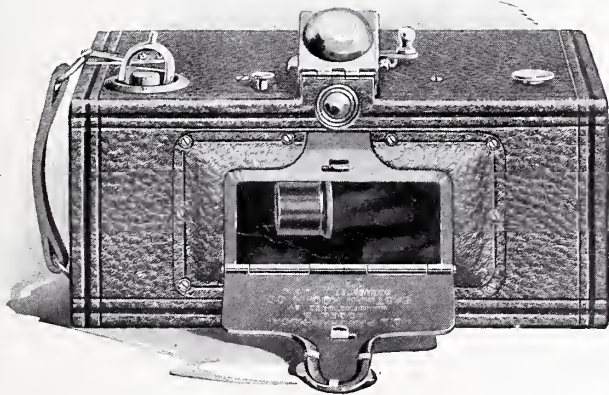
The lens in the Panoram Kodak is mounted on a pivot which, with lever pressure, automatically swings from one side of the camera to the other, embracing an angle of 112 degrees with the No. 1 Panoram and 142 degrees with the No. 4. The shutter operates simultaneously, insuring even lighting during exposure. In other words, the Panoram Kodak lens includes the whole view at a single exposure—not merely a piece of it as is the case with the ordinary type of camera. Whether it be out-door groups or broad vistas of picturesque nature with the camera held in a horizontal position; or high water-falls, buildings, mountain peaks etc. with the camera held vertically, the Panoram Kodak will produce pictures attracting immediate attention from their unusualness. Landscape pictures, for example, will give the effect

of the freedom, the breadth of the out-of-doors, that the ordinary type of camera, from the very nature of its construction can never approach.

The operation of the Panoram Kodak being largely automatic could hardly be simpler and still *be*. It's a case of you press the button and it does the rest.

No. 1 Panoram Kodak

Details: For rectangular pictures, $2\frac{1}{4}$ x 7 inches. Capacity, 6 exposures without reloading. Size of Kodak, $3\frac{3}{8}$ x $4\frac{3}{8}$ x $7\frac{3}{8}$ inches. Weight, 24 ounces. Lens, specially selected as to quality and focal length. Shutter, Panoram. Two tripod sockets. Brilliant finder with hood. Uses No. 1 F. P. Kodak cartridges.



Prices

No. 1 Panoram Kodak	\$10.00
N. C. Film Cartridge, 6 exposures, $2\frac{1}{4}$ x 7 (No. 105)	.40
Ditto, 3 exposures	.20

No. 4 Panoram Kodak

Details: For rectangular pictures, $3\frac{1}{2}$ x 12 inches. Capacity, 4 exposures without reloading. Size of Kodak, $4\frac{3}{4}$ x $5\frac{5}{8}$ x $10\frac{1}{8}$ inches. Weight, 2 pounds 14 ounces. Lens, specially selected as to quality and focal length. Shutter,

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

Panoram. Two Tripod sockets. Brilliant finder with hood. Uses No. 4 B. E. cartridges.

Prices

No. 4 Panoram Kodak	\$20.00
N. C. Film*Cartridge, 4 exposures, 3½ x 12 (No. 103)	.75
Ditto, 2 exposures	.45

AN ALBUM THAT DODGES THE AGE LIMIT.

The Interchange is one album that absolutely refuses to be Oslerized. Even when the last page has received its full quota of prints the active life of the album is far from ended. It is regularly furnished with fifty linen leaves—black only—but inasmuch as it is made on the loose leaf principle, extra pages may be added from time to time as the photographic collection grows. So it is that the Interchange Album is unusually long-lived.

Some albums are quite properly kept out of sight when not in use. Not so the Interchange. It is far too handsome for that. The rich effect gained through the special embossed leather cover with grain leather corners and back adds to the attractiveness of any library table.

The price of the Interchange Album ranges from \$2.50 to \$5.00 according to size and style.

"BY FLASHLIGHT."

The booklet "By Flashlight" which may be obtained free from your Kodak dealer or from us gives you the story of flash light work in readable form. Due to Eastman Flash Sheets and the Kodak Flash Sheet Holder, this interesting branch of photography has become comparatively simple. The amateur who can get good results by daylight should do equally well in flash light work. Even the novice will find in "By Flashlight" all that he needs for successful results.

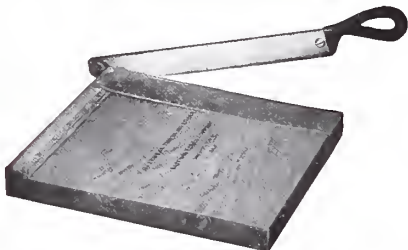
Eastman Flash Sheets are slow burning and give a soft, broad light that exactly answers the illumination requirements of the amateur. The Kodak Flash Sheet Holder provides the ideal method for igniting the sheets and for directing the illumination. A



Kodak Flash Sheet Holder.

saw tooth in the Holder secures the sheet in proper position and a metal sheath is interposed between the operator and the flash. The Holder may be held in the hand or attached to a tripod.

The price of the Kodak Flash Sheet Holder is \$1.00.



The Kodak Trimming Board

Many a picture can be improved by careful trimming and all white margins should be exact. This simple little trimmer answers every purpose of the amateur.

THE PRICE.

No. 1, capacity, 5 x 5 inches, ...	\$0.40
No. 2, capacity, 7 x 7 inches, ...	.60
Transparent Trimming Gauge (extra), ...	.20

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

THERE'S POINT IN THE POCKETFOTO

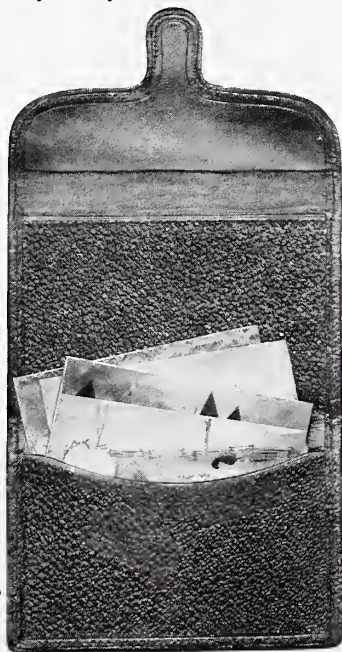
Several weeks ago at a neighborhood gathering, a friend of mine kept his Kodak shutter clicking merrily away as well he might for the children were dressed up in colonial costumes and presented at least one picture opportunity to the minute. Every time I've seen my friend since, I've asked him to show me the pictures; but they were always at home and all the satisfaction I could get was the fact that "they came out fine."

Yesterday, however, it was a different story. "Here are those pictures," said my friend, "that you and about twenty-seven other people have been wanting to see for the past month," and he pulled from his pocket a neat little leather case. It looked like a pocket bill case and fitted the pocket just as conveniently. Inside were the prints, twenty-four of them, but ample room for as many more. Good as the pictures were, it was the case that claimed my interest for the moment. It was such a sensible little thing and so

neat too. "What do you call it?" I asked.

"Pocketfoto," he replied, "and it's the handiest little thing in the world. You know how it is. *You're* a Kodaker and how many times have people asked *you* if they might see such and such a print and how many times have you been compelled to explain that the print was home? An album is too heavy and awkward to carry around, loose prints or prints in an envelope unsafe, but the Pocketfoto—just the thing."

The Pocketfoto that I bought from my Kodak dealer is bound to pay for itself in terms of satisfaction to myself and pleasure for my friends. It's just another Kodak refinement that puts the finishing touches on photographic pleasure.



The Pocketfoto.

The Price.

No. 1, for $2\frac{1}{4} \times 3\frac{1}{4}$ or smaller pictures,	each	\$1.25
No. 3, for $2\frac{1}{2} \times 4\frac{1}{4}$ to $3\frac{1}{4} \times 4\frac{1}{4}$ pictures,	each	1.50
No. 3A, for $3\frac{1}{4} \times 5\frac{1}{2}$ or smaller pictures,	each	1.75



At your dealer's.

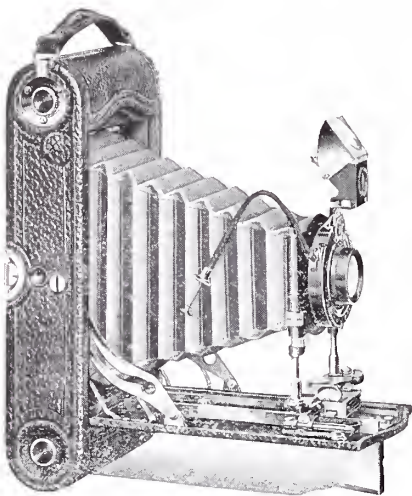
KODAK MAGNESIUM RIBBON HOLDER

A handy little apparatus providing a strong printing light for gas-light papers and enabling the amateur to duplicate exposures with absolute exactness. The alcohol lamp provides a convenient means of igniting the ribbon.

THE PRICE.

Kodak Magnesium Ribbon Holder,	-	\$0.20
Alcohol Lamp, for use with above,	-	.20

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.



The New 3A KODAK

\$27.50

THE LENS. The Kodak Anastigmat *f*.7.7 has a trifle more speed than the best of the Rapid Rectilinear lenses and in quality (depth, *sharpness* and flatness of field) is fully the equal of the best anastigmats. Other anastigmat lenses are made to fulfill a dual purpose; they cover a certain size at their largest opening and cover a larger size as wide angle lenses, when used with a smaller stop. They are, therefore, corrected with a view to this double purpose.

The Kodak Anastigmat does not pretend to cover a larger area than that for which it is listed. But for its specific work, covering with minute sharpness the area which it is supposed to cover, none is better. This also means a saving in manufacturing. Which explains why we can sell it at a lower price than the other high-grade anastigmats.

THE AUTOGRAPHIC FEATURE.—You can *make sure*, can write the date and title on the film, permanently, at the time you make the exposure. After the last exposure you can similarly write your name on the film—an identifying mark that is valuable when you send your work to the finisher. And this “Autographing” the film is a matter of seconds only.

No. 3A Autographic Kodak, ($3\frac{1}{4} \times 5\frac{1}{2}$), with Kodak Anastigmat lens *f*.7.7, \$27.50

All Dealers'.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y., *The Kodak City.*



The novice who used a

Kodak Film Tank

for the first time yesterday got better results than he could get by tray development in twenty years.

“The experience is in the Tank.”

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*There is just one temperature at which a
solution does its best work.*

Eastman Thermometer



Absolutely accurate.
Convenient for either
tray or tank develop-
ment although par-
ticularly adapted to
the latter because of
its hook top and
curved back.

Price, \$.50

Thermometer Stirring Rod

Combines a reliable ther-
mometer with a handy stir-
ring rod. The flat end will
be found useful for crush-
ing chemicals.

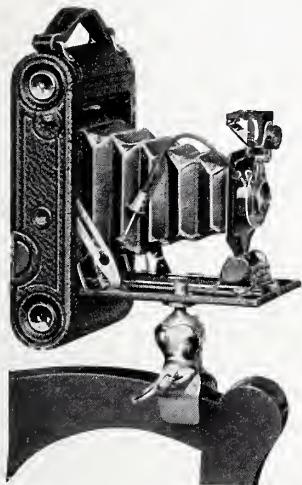
Price, \$.60.



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ROCHESTER, N. Y.

At your dealer's.

Two first aids to the time exposure:



The Universal Clamp

A tripod substitute which, when attached to a chair, fence, automobile—in fact any rigid support, renders *full* tripod service. So light and small that it slips into any pocket conveniently.

Universal Clamp, - - - - - \$.75

The New Kodak Metal Tripod

a pocket tripod

Folds flat so that it has room to spare in the ordinary coat pocket. Rigid in construction, easy to set up and take down—conveniently handy, *always*.



No. 6 Kodak Metal Tripod, - - - - - \$5.00

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

At your dealer's.



GRAFLEX CAMERAS

PICTURES LIKE THESE ARE EASY TO MAKE—when you use a Graflex Camera.

In shade or sun, indoors or out, the Graflex is always ready to make the kind of pictures you have always wanted. And when you use a Graflex there is no uncertainty. A glance in the focusing hood shows the image the size it will appear in the finished picture, right side up, and the image remains brilliantly visible up to the instant of exposure. It is not necessary to estimate the distance between the camera and the subject; focusing scale and finder are done away with.

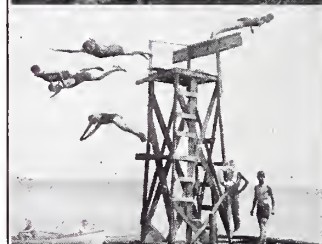
Every Graflex Camera is equipped with a Graflex Focal Plane Shutter—the shutter that works at all speeds from “time” to 1-1000 of a second, and enables your lens to work at its full efficiency.

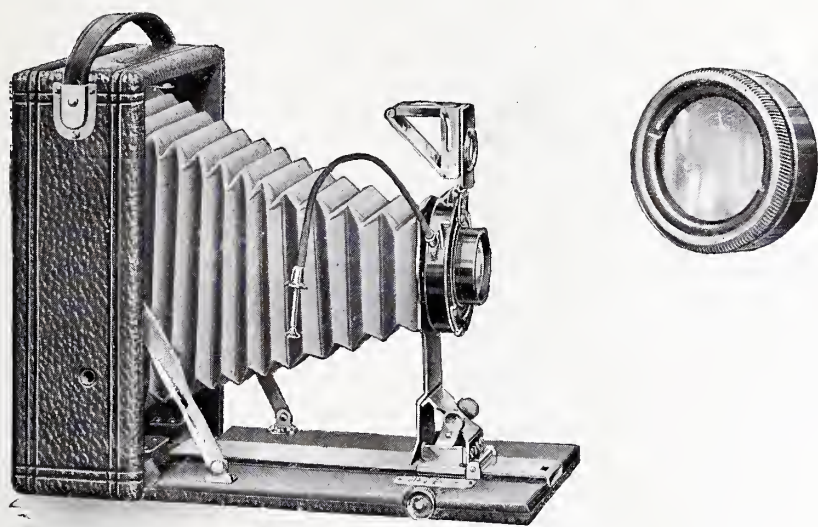
Graflex Cameras are fully described in our 64-page illustrated Graflex Catalog. Your copy will be mailed for the asking.

Folmer & Schwing Division

EASTMAN KODAK COMPANY

Rochester, N. Y.





*An unusually efficient camera for
home portraiture*

Pocket Premo C

Fitted with Kodak Portrait Attachment

The ground glass allows you to focus sharply and compose the picture just as you want it. There is a rack and pinion attachment for convenient focusing and you can use films or plates just as you desire.

Pocket Premo C for $3\frac{1}{4} \times 4\frac{1}{4}$ pictures, \$12.00.

Ditto, for $3\frac{1}{4} \times 5\frac{1}{2}$ pictures, \$15.00.

Kodak Portrait Attachment for either size, \$0.50.

Get the Premo catalogue from your dealer, or write us.

ROCHESTER OPTICAL DIVISION

EASTMAN KODAK CO.

ROCHESTER, N. Y.

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Photo by C. M. Daguerre

Getting Clean Results

There is more than just speed needed to justify a lens—you must have the covering power and definition that do get clean results under difficult conditions of light. And such results are certain with a

Bausch^{and} Lomb Zeiss TESSAR LENS

Master of Speed and Light

The Tessar is the greatest antidote to failure. The extreme speed of the Ie Tessar, F:4.5, makes it unequalled for reflecting cameras, snap shots or portraiture. Its illuminating power is so great that it can be relied on for difficult work on cloudy days or indoors. The Ic is three

times as fast as ordinary camera lenses, and its covering power is very large in proportion to focal length. Tessar IIb, F:6.3, is a fast anastigmat lens, with 61% more speed than the usual camera lens, and is the standard anastigmat selection. It can be fitted to any style hand camera.

Your dealer can tell you about trying a Tessar. Our booklet "What Lens Shall I Buy" is sent upon request

Bausch & Lomb Optical Co.

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Leading American makers of Photographic and Ophthalmic Lenses, Microscopes, Projection Lanterns (Balopticons), Stereo Prism Binoculars and other High Grade Optical Products

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REXO
CAMERAS

Recognition Won By **REXO CAMERAS**

THESE new cameras are winning on sheer superiority. They offer features not incorporated in similar cameras, and if you want the latest and best in camera construction you will choose one of the *Rexo Cameras*.

Reasons Why

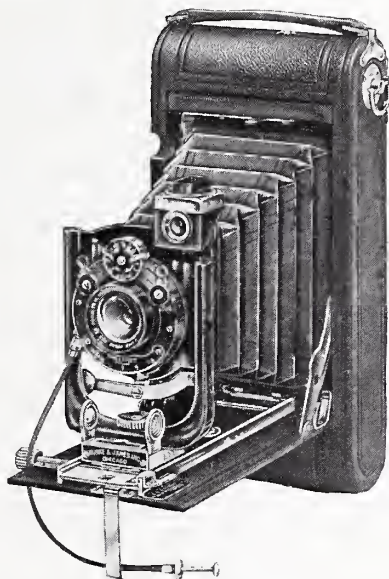
Lens Quality—Regularly equipped with the finest rapid rectilinear lenses obtainable. Rigidly tested and guaranteed.

Shutter—Guaranteed Ilex Shutters used exclusively. *Finder*—New Rexo Masking Finder, showing only those objects that will appear in the finished picture.

Instantly adjusted to vertical or horizontal use. *Standard*—Rigid one piece U-shaped construction, with maximum rising and sliding movement. Operating on wide bed track. The ideal standard.

Focusing Device—The only camera at anything like its price equipped with rack and pinion for fine focusing. Self-aligning focusing scale. *Back*—Sure locking back with new film aligning plate that absolutely prevents curl or buckle of the exposed section of the film, insuring sharp pictures.

Rexo Specials—Handsome Morocco covering, Acme Shutter and finest anastigmat lens. A De Luxe edition.



3A Rexo Special

These are some of the *Rexo* points of excellence. The best way is to see the camera for yourself. Ask your dealer or send for the 1916 *Ingento Book* describing the full line of *Rexo*, *Junior* and *Rexoette* Cameras, priced from \$2.00 to \$66.00.

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A DEVELOPING PAPER

The Guaranteed
Developing Paper

A Grade for every negative. Widest latitude in exposure and development. You'll make your best pictures on *Rexo*. Regular, Enlarging and Professional.

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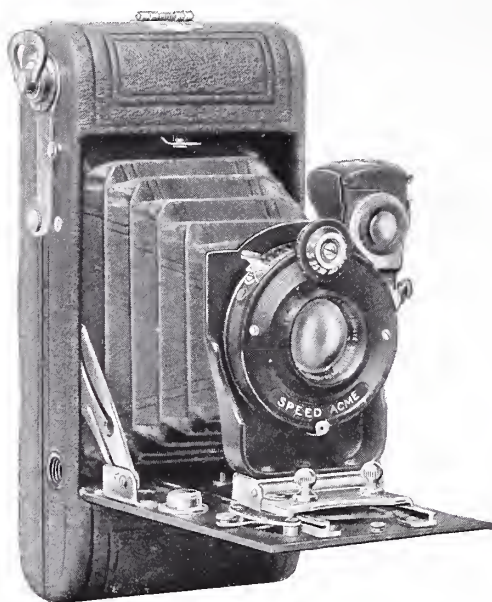
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225 Fifth Avenue
NEW YORK

Makers of Rexo Cameras, Paper and Photo-Supplies

PHOTO SUPPLIES

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V. P. Speedex 2 $\frac{1}{4}$ x3 $\frac{1}{4}$, with Celor Lens, Acme Shutter

TAKE A VEST POCKET SPEEDEX IN YOUR POCKET WHEN YOU GO SKATING OR COASTING

THE full enjoyment of winter sports does not permit the carrying of a cumbersome camera. With a V. P. SPEEDEX in your pocket you are well equipped to take active part in skating, coasting, skiing and snow shoeing; and at the same time you are ready to take pictures of the very scenes of which you are a part. The V. P. SPEEDEX fitted with the GOERZ CELOR LENS and ACME SHUTTER is the very outfit for the purpose, though the GOERZ DAGOR and GOERZ SYNTOR LENSES are plenty fast enough under favorable conditions, to "stop" your subject.

This little instrument weighs but 15 $\frac{1}{2}$ ozs; closed for the pocket it measures 1 $\frac{1}{4}$ x2 $\frac{3}{4}$ x6; uses standard 2 $\frac{1}{4}$ x3 $\frac{1}{4}$ roll film; has brilliant collapsible finder; two tripod sockets; the front locks at infinity, closer focusing up to four feet is done with accurate focusing lever and the camera is beautifully finished and covered with genuine morocco leather. Full information in regard to this very attractive instrument at your dealer's or direct from us.

PRICES

With Celor F:4.8, Acme Shutter, Maximum Speed 1/300, \$55.00

" Dagor F:6.8, Compound Shutter, Max. Speed 1/300, 52.00

" Syntor F:6.8, Compound Shutter, Max. Speed 1/300, 45.00

C. P. GOERZ AMERICAN OPTICAL COMPANY

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YOUR BEST NEGATIVES

will make splendid lantern slides. Slides are as easy to make as paper prints and will help you get more pleasure from photography.

The McIntosh Miopticon will project your slides in a way sure to please you and makes an excellent enlarging camera. Enlarges $3\frac{1}{4} \times 4\frac{1}{4}$ negatives to 12×14 or larger.

Send dealer's name and ten cents for valuable booklet, "How To Make Lantern Slides."



McIntosh Stereopticon Co.

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"McIntosh Lanterns Are Honest Lanterns"

HEAR YE! HEAR YE!



OUR 1916 CATALOGUE

A Beautiful Booklet
of interest to the Pro-
gressive Photographer
IS NOW READY

COPY FROM YOUR DEALER
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WOLLENSAK OPTICAL CO.,
Rochester, New York.



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Home Portraiture Requires An Equipment

permitting the photographer to work conveniently and expeditiously **WITH CERTAINTY OF SATISFACTORY RESULTS** to both the customer and himself.

Our Home Portrait Outfits

comprising a Criterion View Camera, Korona Folding Studio Stand and choice of several types of lenses meet fully the requirements of the expert in this field and merit your consideration. The fine workmanship and beautiful walnut finish must command your admiration.

We shall be pleased to respond to your application for a catalogue.

Gundlach - Manhattan Optical Company

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THE PHOTO-ENGRAVING DEPARTMENT



The Royle line of photo-engraver's machines has the confidence of users everywhere. Distinctive styles of proved standing free from constructive faults. In sufficient variety to suit any pocket book.

Let us suggest an outfit.
Write for printed matter.

JOHN ROYLE & SONS, Paterson, N. J.
MACHINERY FOR THE PHOTO-ENGRAVER

Pacific Coast Agents: Geo. Russell Reed Co., San Francisco, Calif.

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CARMICHAEL'S

Established 1898

High Grade Camera and Lens Specialists

We offer the following high grade photographic equipments at prices named; and we allow the privilege of **TEN DAY'S TRIAL FROM DATE OF RECEIPT BY YOU**, and in the event of any dissatisfaction whatever, the full amount of purchase price will be refunded. We make a more liberal cash offer for strictly high grade cameras and lenses, and also allow more in exchange than any other concern in the business.

One 3A Graflex equipped with No. 15A Zeiss Tessar F4.5 lens, in fine guaranteed condition.....\$75 00

One No. 1A Graflex equipped with Cooke F4.5 Anastigmat 65 00

One 3A Eastman Kodak Special equipped with IIB Zeiss Tessar F6.3 lens and Compound shutter..... 50 00

One No. 1A Kodak Special equipped with Zeiss Kodak lens and Compound shutter, splendid condition 32 50

One No. 1 Autographic Special Kodak equipped with F4.5 Zeiss Tessar and Optimo shutter, practically new..... 43 50

One Icarette Model B equipped with Carl Zeiss Icar F6.3 lens, size 2 1/4 x 2 1/4 films and six plate holders, size 4 1/2 x 6 c. m..... 35 00

One Icarette Model A with F4.7 Carl Zeiss IC Tessar and Compound shutter..... 43 50

One Compact Graflex with 7-inch F4.5 Tessar lens \$5 00

NO BARGAIN LIST PUBLISHED; ALL OUR CAMERAS ARE BARGAINS.

Tell us what you have to exchange or what you want and please be explicit.

The Reason Why

No one expects to get portrait results by direct sunlight, yet many condemn Flashlight because they fail to get such results with the open flash.

The Home Portrait Lamp does for flashlight what the skylight does for daylight—it adapts it to use in portrait photography. But so perfect has this control become that men seeking prize effects are using it in preference to daylight.

Put away that haunting dread of failure by having always at hand

The Halldorson Home Portrait Flash Lamp

A COMPANION TO YOUR CAMERA

A beautiful photograph made with this lamp sent free upon request.

THE HALLDORSON COMPANY

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CONVERT YOUR PHOTOGRAPHS INTO MONEY

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LOCAL VIEW SUBJECTS

can also be made into post cards to be sold to stores. Our styles and the high standard of quality we put into our line make sales easy. Ask us how to go about it.

Curt Teich & Company
Incorporated
Manufacturers of View Post Cards,
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THE BEST INTENSIFIER

ONE SIMPLE SOLUTION

Strengthens the negative without losing the quality in halftones and highlights, rendering a negative of exquisite graduation and printing quality.

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If you cannot procure it from yours remit 50 cts. and we will send a bottle to your address by prepaid express.

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Made by Amateur with One No. 30 Actino

Catch Them by Flashlight

A sure and easy means of securing good negatives of lively subjects is supplied by

Actino Flash Cartridges

which are put up in correctly measured sizes for various distances.

Your dealer sells and recommends them and will supply free, our instructive illustrated booklet, "Flashlight Photography."

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Changing light values call for plates of greatest speed, color-range and latitude of exposure.

Hammer's Extra Fast Orthochromatic and D. C. Orthochromatic Plates are such.

Hammer's Special Extra Fast (red label) and Extra Fast (blue label) Plates for all-round work.



Hammer's little book, "A Short Talk on Negative Making," mailed free.

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and quality only, explains why we have been so favored with the orders of a host of appreciative customers continuously over a long period of time devoted to the manufacture of photographic paper. Quality in our product has held these customers as it is to-day making new friends. A trial of Kruxo will convince. A liberal sample, assorted, with developer, 25 cts. postpaid. Well worth your while.

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Kilborn Photo Paper Co.
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Pacific Coast Distributors:
Southern California: WM. J. GROW
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536 So. Brdwy, L. A. 712 Market Street, S. F.

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Day or Night, Get Wonderful Results!

Are you *always* having trouble with your flashlights? Here is a quick, simple and inexpensive way to overcome all former problems. With an—

IMP FLASHLITE GUN

anyone, professionals or beginners, can take moving objects, groups, pets, etc. Simply pull trigger and the IMP ignites the flash and operates the shutter *simultaneously*. Everyone owning a camera *needs* the Imp Flashlite Gun.

Dealers can greatly increase their photo supply business with the IMP. They should write us for our attractive proposition.

Actual Demonstration at Booth 130 Cleveland Convention

MAN AND GUN

THE IMPERIAL BRASS MFG. CO.

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GUN COM 'LETE, \$1.75



SAFE

RUBY BULB Hylo Mazda Lamps

THESE new darkroom-lamps embody all the advantages of the MAZDA lamp, and also offer you two lamps in one.

The density of the natural ruby glass employed is such that the most sensitive plates can be handled in absolute safety under the illumination provided by the small filament.

For developing-papers and ordinary plates use the higher candle-power filament.

This handy ruby Hylo MAZDA lamp is **either clear or completely frosted and is tipless.** Sells at \$1.50 to consumer, and is guaranteed.

Can be had from Photo-Supply or Electrical-Supply Dealers; Pacific Coast Trade Supplied by HIRSCH & KAISER, 218 Post St., San Francisco. Manufactured by

ECONOMICAL ELECTRIC LAMP DIVISION
National Lamp Works of General Electric Company
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THE CORRECT EXPOSURE

Instantly—Accurately—Easily

All guess work eliminated. Correct time shown on plainly marked scale. Requires no sensitive paper, timing or counting device to get its reading. Used at any speed with any plate, film, or diaphragm.

Trilux Exposure Meter

The easiest meter on the market to use—gives accurate results and guarantees satisfactory exposures. No larger than a roll of film—weighs less than 3 ozs. Neatly made of gun metal and nickel. Use the Trilux and **Never Lose a Film.** At your dealer's or postpaid for \$2.00.

Write for booklet.

TRILUX PHOTO CO. 1401W Marquette Bldg.
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ANSCO DELUXE CAMERAS, when fitted with Rodenstock's Anastigmats, are the model of perfection—a tribute to its originators.

Send for descriptive matter.

A 2 cent stamp will bring two valuable Exposure Meters—Regular and Graflex.

INSIST
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RODENSTOCK
ANASTIGMAT LENSES

W. J. LAFBURY CO.
305 N. 5th Ave. Chicago



AIR BRUSH FOR ART WORK

We're doing business at the old stand making and selling more than ever of the **BEST ART TOOL** in the line for good work. Send for circulars to-day and learn of its many uses.

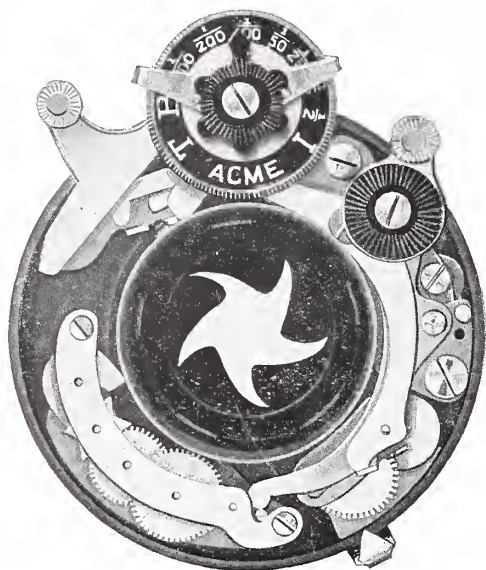
AIR BRUSH MFG. COMPANY

73 Nassau Street

Rockford, Ill., U. S. A.

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Every American

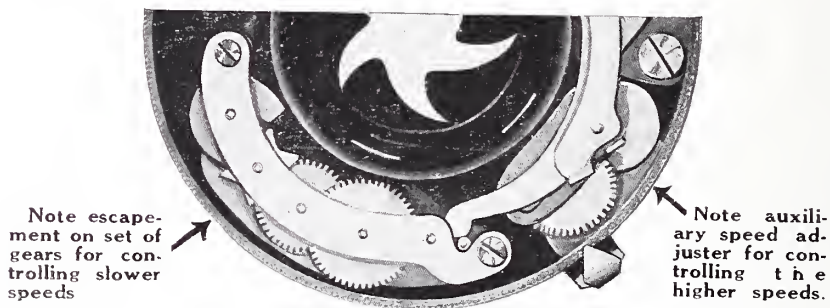


and some of the largest foreign camera manufacturers have adopted ILEX SHUTTERS. Why? Because their merits have proven that the ILEX OPTICAL COMPANY have the only means of furnishing a Shutter that is RELIABLE, ACCURATE and DEPENDABLE.

An European manufacturer of a world renowned Shutter has found it necessary to substitute gears for the unreliable air pumps or valves in order to compete with the famous ILEX SHUTTERS, which are THE ONLY VALVELESS SHUTTERS in the market. This, of course, is an infringement on the ILEX patents,

Every Speed is Automatically Controlled

therefore exact variations and accuracy on all indicated speeds under any climatic conditions or in any position of the camera.



Note escape-
ment on set of
gears for con-
trolling slower
speeds

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ary speed ad-
juster for con-
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higher speeds.

The extensive adaptation of the highest grade Anastigmat lenses made in the United States and Europe is another evidence of the superiority of ILEX SHUTTERS.

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ILEX OPTICAL COMPANY, 620 Ilex Circle, Rochester, N. Y.

"Use an ILEX and avoid shutter trouble"

Better Lightings Secured
and all annoyance to patrons removed

by the use of
**Victor Portable
Flash Bags**

in photographing
store, factory, home
and office interiors—
groups and banquets.

These bags thoroughly
diffuse the flash. They
permit of making several
exposures without empty-
ing smoke. Are simple,
yet durable, in construc-
tion.

*Send for complete
descriptive folder.*

JAS. H. SMITH & SONS CO.

3541 Cottage Grove Ave.

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**Don't Be Content With
Mediocre Results!**



You are about to start on a new pho-
tographic season; why not invest in a
really good lens, thus insuring a higher
average of successful pictures. The
lens to choose is the

**Voigtlander
Dynar F:6**

a true anastigmat of great speed and
perfect optical correction. The small
sizes of the Dynar are especially in-
tended for use on folding hand and
pocket cameras.

It is the one lens that best meets the needs
of the amateur. It possesses ample speed,
being twice as rapid as the best rectilinears.
It is excellent for landscapes, portraits, en-
larging and flashlight work. In fact it is the
favorite lens of many experienced amateurs.

The Dynar is sold in cells fitting the shutter
supplied on all modern cameras. Quality con-
sidered, the Dynar is the best buy on the Ameri-
can market. It is the lens for you to own.

3 1/4 x 5 1/2 and 4 x 5 cells\$23.50



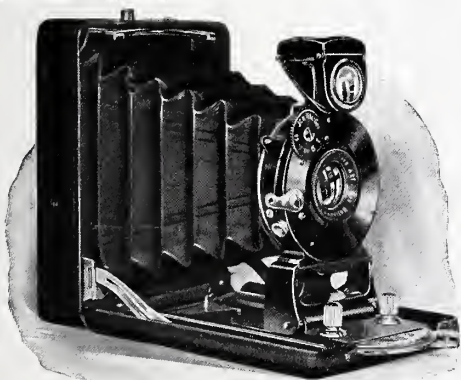
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CHICAGO

Works
Brunswick, Germany



ONE-HALF SIZE

ICA VICTRIX

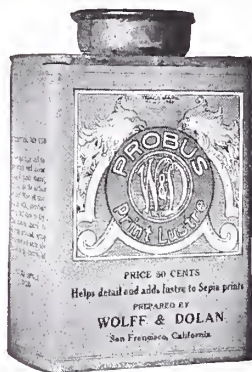
A perfect miniature camera, size 1 3/4 x 2 3/8 inches,
for use with plates or film packs. Lens is the Helios
Double Rapid Aplanat, shutter the Ica Auto with five
speed adjustments. The finder is large, brilliant and
reversible. Focusing scale is adjustable to three feet.
There are two tripod sockets, focusing back and *lots of
quality* in the Victrix.

Complete with Three Plate Holders
FIFTEEN DOLLARS

International
PHOTO-SALES-CORPORATION

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PROBUS PRINT LUSTRE

A preparation which should appeal particularly to critical photographers, whether amateur or professional. It adds brilliancy and depth to shadows and gives a wonderful lustrous finish to all grades of Artura, Cyko and other developing papers, or Bromide prints. Helps detail and is especially effective on sepia toned or redeveloped prints. *Half Pint Sealed Tin, 50cts.*

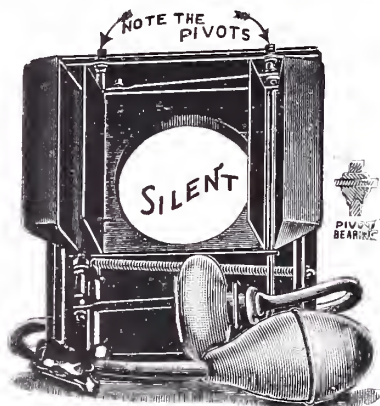
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WOLFF & DOLAN, Mfrs., 220 Post St., San Francisco

UNCERTAIN DAYLIGHT—THE “DEMON” OF YOUR OPERATING ROOM

can be stripped of all power to injure your business by the adoption of an ever-available auxiliary light of instantaneous strength and of adjustable volume. The Victor Studio Flash Cabinet puts such a light constantly at your command. Write us to-day for full particulars.

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NOTICE HOW SIMPLE THEY ARE MADE

“Silence is Golden”

The professional photographer appreciates the advantage of a silent shutter. When that desirable feature is combined with a simple and scientific construction, one doing away with all cogs, ratchets, valves, scraping wings, and the like, one then has the ONLY SILENT STUDIO SHUTTER. It “opens without a sound.”

They are patented and made only by us. Be sure your order reads S-I-L-E-N-T, and accept no other. For sale by all jobbers. Its best recommendation—thousands of satisfied users.

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Conley Camera Company

Rochester, Minnesota

HIGGINS' PHOTO MOUNTER PASTE



*The kind you are
sure to use with
continuous
satisfaction*

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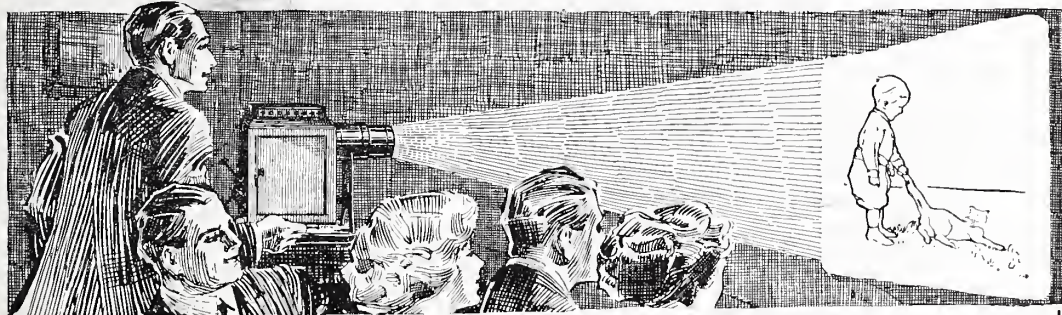
CROWN YOUR EFFORTS WITH THE CRAMER CROWN

The Plate of Quality
for dull light
or dull business

Plates and Color Filters for Every Purpose

G. CRAMER DRY PLATE CO.

ST. LOUIS, MO.



New Interest Given to Your Pictures

There is novelty, as well as better justice to your pictures, if you show them with the Balopticon. And you avoid all the bother of passing loose prints or an unhandy album.

With either lantern slides or actual prints the Balopticon gives full value to all details with a crisp sharpness over the entire field. The new gas-filled Mazda Lamp of the Balopticon gives more brilliant illumination, and with much less current, than the arc lamp. It is wholly noiseless and automatic, requiring no rheostat.

Bausch and Lomb
BALOPTICON
THE PERFECT STEREOPTICON

Home Balopticon — for prints, post-cards and opaque objects . . . \$35.00

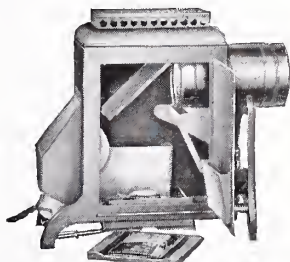
Combination Home Model for both opaque and slide projection, . . . \$45.00

Model B for slides only . . . \$22 up

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BAUSCH & LOMB OPTICAL CO., 562 St. Paul St., Rochester, N.Y.

Leading American makers of Protar and Tessar Photographic Lenses, Microscopes, Stereo, Prism Binoculars, Ophthalmic Lenses and other high-grade optical products.



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Simplex

"Northern Light"

**SAVING \$585.00
ON INSTALLATION ALONE**

\$500 minus \$40=\$460, the saving to you through using our new portable "Northern Light" in place of the heavy non-portable mercury vapor installation in vogue heretofore, besides a continuous saving in electric current and upkeep.

Anywhere—indoors or out—did you ever hear of a single stand light of sufficient actinic strength to give you well timed negatives at sixteen exposures or faster per second? The "Northern Light" is the answer. Its pure violet white rays will permit of the quickest exposure indoors.

Stop fidgeting around or painstakingly waiting to get a time exposure of a nervous child or an irritable person or group with many inevitable failures or a reward for your work.

The "Northern Light" plugged in on any house circuit will enable you to make an instantaneous portrait exposure, thereby stopping all motion, even the winking of an eye lash, and with most superior lighting effects—simply because the "Northern Light" is constructed on entirely different lines than any other light, "Mercury Vapor" or otherwise, that has ever been offered for any such purpose.

The "Northern Light" is very strongly made with nothing whatever to get out of order, yet it is presented so portable with a telescopic stand, all in a strong carrying case that it can be set up in any home, club room or at any other point of use.

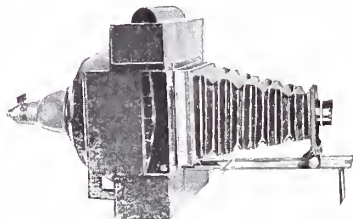


PRICES OF NORTHERN LIGHTS

- No. 1—15 Ampere Lamp, 1500 watts, can be connected to any house wiring, gives 10,000 candle power, complete with special telescopic stand and strong carrying case and hinged shipping crate, both with lock and key.....**\$40.00**
- No. 2 25 Ampere Lamp, 2500 watts, using heavier cable, gives 14,000 candle power, complete with special telescopic stand and strong carrying case and hinged shipping crate, both with lock and key.....**\$50.00**

It is up to you to get your order in immediately for one or more of these lamps and improve your work and beat your competitor in getting work which he will if you don't.

MULTIFLEX ENLARGER



\$150 minus \$25=\$125, the saving to you through using our new portable "Multiflex Enlarger" in place of the heavy non-portable condenser arc lamp installation in vogue heretofore, besides a continuous saving in electric current and upkeep.

The same relation that the dry plate bears to its predecessor, the wet plate, does the "Multiflex Enlarger" present to the now old fashioned and expensive method of enlarging by means of easily broken expensive condensing lenses and wasteful electric current.

OTHER SIMPLEX PRODUCTS AWARDED GOLD MEDALS AT PACIFIC EXPOSITIONS :

**Alamo Motion Picture Cameras
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**Simplex Precision Cameras
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**Multi-Exposure Cameras
Simplex Film Printers**

Descriptive matter and prices pertaining to each gladly sent on application.

SIMPLEX PHOTO PRODUCTS CO.

Richmond Hill, New York

E. K. Tested Chemicals

are exactly what the name implies
—chemicals that have been carefully tested by the Eastman Kodak Company and found to fulfill its necessarily exacting requirements.

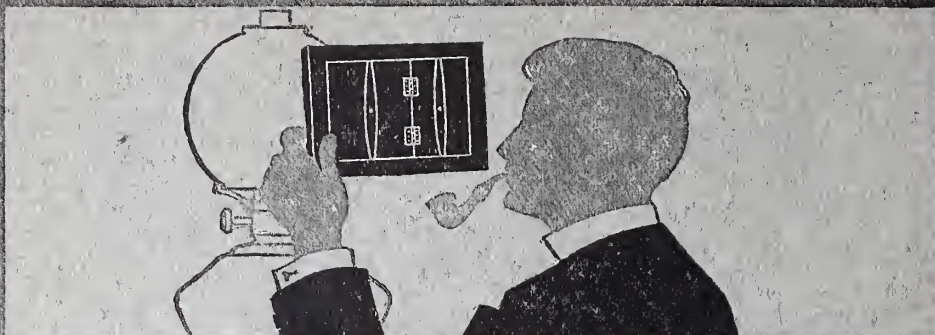
*Look for the seal—
it makes you certain:*



EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

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Prints by Gaslight

The best print you can get on

VELOX

is the best print you can get.

You will find many a valuable photographic pointer in the Velox Book. It's free and your dealer would be glad to give you one—or we will send it to you if you like.

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